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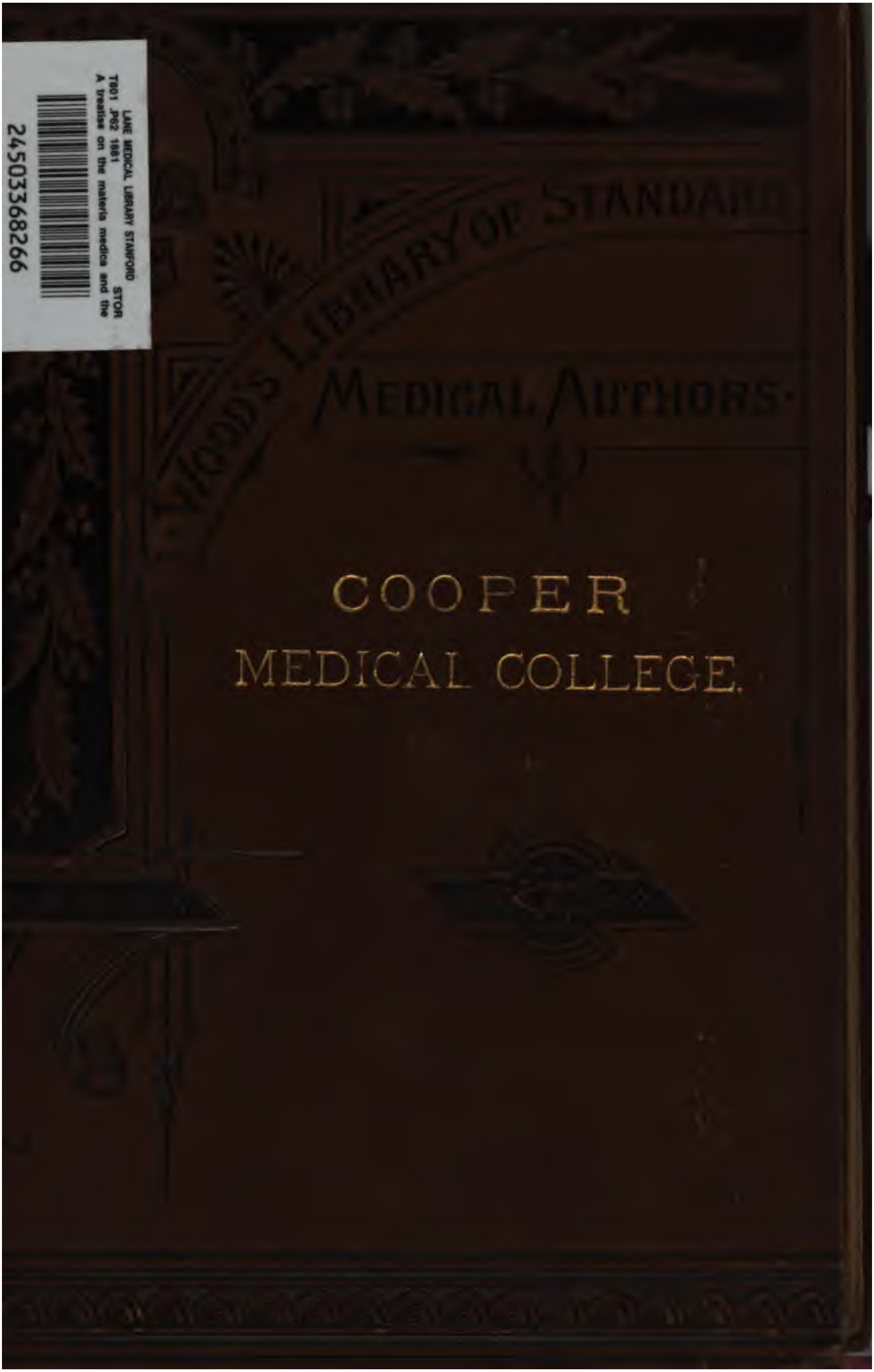

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A TREATISE

ON THE

MATERIA MEDICA

AND

THERAPEUTICS OF THE SKIN

BY

HENRY G. PIFFARD, A.M., M.D.

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Surgeon to Charity Hospital, etc.

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"Morbi *epidermidem, epithelium, cutim et cellulosam membranam* afficientes tam multi sunt, ut vix in ordinem patiantur redigi; ex medicamentis autem quæ maxime ad eorum morborum curationem sunt in usu, hic proponemus."—DE GORTER (1740).

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PREFACE.

The following pages have been the outgrowth of the author's own requirements, as he early became satisfied that a knowledge of the experience of the past should be the foundation on which to begin the study of the present. This conviction led to the collection of the material that forms the first part of this book. Believing that the information thus obtained would prove as useful to others as it has to himself, it is here offered in a form that will permit of ready reference. Long before the collection assumed its present bulk, the author was surprised at the number of drugs, that, on the testimony of observers, appeared to exert an influence on the skin. He did not feel warranted, however, in greatly curtailing the list, except in instances where sufficient experience appeared to throw very grave doubt on the accuracy of the recorded observations.

A correct knowledge of the drugs that affect the skin, and the ways in which they act, naturally precedes their application. It is equally necessary to know when and how to apply them. This information the author has endeavored to supply in the second portion of the work. He has deemed it expedient, also, to give a brief synopsis of the diseases themselves, in order to aid in their recognition, and to display more clearly the rationale of the treatment recommended. While he has endeavored to record the more salient features connected with the subjects discussed, much has necessarily been omitted, enough, perhaps, to fill several volumes the size of the present one. For these deficiencies he must crave the indulgence of the reader. In conclusion the author desires to acknowledge kind assistance from his friend, Dr. W. T. Alexander, and to express his thanks to his colleagues of the New York Dermatological Society, who frankly placed at his disposal their individual experiences in connection with the use of drugs in the treatment of cutaneous diseases.

H. G. P.

10 West Thirty-fifth Street,
New York, January, 1881.

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TABLE OF CONTENTS.

Part I.

MATERIA MEDICA.

PAGE
INTRODUCTION, ... 1
DRUGS, ... 5

Part II.

THERAPEUTICS.

INTRODUCTION, ... 118
DISEASES, ... 126
BIBLIOGRAPHY, ... 318
FORMULARY, ... 325
INDEX, ... 345

MATERIA MEDICA
AND
THERAPEUTICS OF THE SKIN.

PART I.
MATERIA MEDICA.

INTRODUCTION.

THE relief or cure of cutaneous affections is effected in part by drugs and in part by other agencies; but, as drugs are by far the most important of the means at our command, special attention is here devoted to them. The systems of classification adopted by works on general materia medica were found inapplicable to the present purpose, and consequently an alphabetical arrangement was adopted, in the belief that it would, on the whole, prove more convenient and satisfactory. The drugs included are those which, according to the statements of authors, exert an effect (direct or indirect) on the skin, and it was the desire of the writer to present as full a catalogue of drugs, and as full a statement of observed effects, as his opportunities and the time at his disposal would permit. To this end he has carefully examined upwards of fifty treatises on materia medica, and an equal number of works on dermatology, and less completely the files of about one hundred medical periodicals, transactions, etc. The result was the collection of a large mass of information which could only be rendered easy of access and readily available by some systematic plan of arrangement. The one adopted is as follows: If the drug is contained in the United States Pharmacopœia, its officinal name is given; and if the drug be of vegetable origin, the name of the plant follows (in brackets) together with the botanical authority for the name, expressed in the usual manner. This is followed by an initial letter indicating the pharmacopœia which includes the drug; and if it be not included in either the United States or British pharmacopœias, by initials indicating the dispensatory in which a further account may be found.

In some cases one or more of these items fail, for the reason that the drug is not mentioned in any of the pharmacopœias or dispensatories consulted.

The abbreviations indicating these works are as follows:

U.S.	The Pharmacopœia of the United States of America, 5th Revision.
B.	British Pharmacopœia, 1867.
G.	Pharmacopœa Germanica, 1872.
F.	Codex Medicamentarius, Pharmacopée Française, 1866.
P.	Pharmacopœa Homœopathica Polyglotta, 1880.
U.S.D.	The Dispensatory of the United States of America.
N.D.	The National Dispensatory.

Following the title line, the drug is considered under four general heads indicated by the letters **A**, **B**, **C**, and **D**.

Under **A**, are embraced the effects on the healthy skin that follow the ingestion of the drug.

Under **B**, the effects produced on the healthy skin by the local application of the drug.

Under **C**, the cutaneous affections in which the drug has been found curative or useful when administered internally.

And under **D**, those in which the drug has proven useful when locally applied. In many instances one or more of these general heads is omitted for the reason that the author is not in possession of any facts or statements that could be properly included.

In certain instances, when the statements concerning the effects of a certain drug are well-known facts, as that mercury is useful in syphilis, no authority for the statement is given; in other cases the authority is indicated, and in many cases a number of authorities are given. Whenever practicable the exact words of the original, or their equivalent, are given. In some cases this is abbreviated to a single word, which performs the rôle of a predicate, the subject being the drug under consideration; thus, under *Arsenici Iodidum:* **C**—Lupus, **44**, 116; **83**, 310 implies that the drug mentioned has been found useful, when internally administered, in the treatment of lupus. The heavy figures indicate the works in which this statement is made, and the smaller figures the pages on which it occurs. On consulting the bibliography, the numbers above given are found to correspond to Waring's Therapeutics, and to Thomson and Parkes' Treatise on diseases of the skin. In references like the above, it is to be understood that I have personally examined the original; but a bracketed reference, *e. g.*, (Henke's *Zeitschrift*, '21) **39**, 76 implies that the original (in brackets) has not been accessible, and that the statement is taken at second hand, on the authority of the succeeding reference.

The words "*dartres*" and "*Flechten*" will be found invariably in italics for the reason that they are words from foreign languages, and are of rather indefinite meaning and incapable of exact translation, unless the English word "salt-rheum" be accepted as their equivalent. The word *scabies* will also be sometimes met with in italics chiefly in references dating back to the last century, at which time the term had a wider significance than at present, and included the different varieties of eczema, lichen, etc.,—in fact, was nearly equivalent to the French and German words above given.

With these explanations it is believed that the reader will be able to avail himself to the fullest extent of the practical information contained in this section of the book.

Until within a very few years there was hardly a drug credited with direct action on the skin, except arsenic and the various diaphoretics. The treatises on materia medica were silent on the subject, and even the more recent ones barely refer to the matter in connection with belladonna, bromide of potassium, and quinine. It is true that, with the exception of a very few drugs, the phenomena recorded under **A** are rare and unusual, and it is this very fact that makes it important that they should be collected together in some available form, for reference, if for no other purpose. The accomplished physician is supposed to have always in mind the more prominent and constant effects of the drugs he uses; these, his own experience as well as the teachings of the books have made familiar to him, but now and again, during the treatment of some common affection, unexpected symptoms referable to the skin may appear. Under these circumstances it will certainly be wise to consider the drugs he has been using, and to ascertain, if possible, whether similar effects have arisen at the hands of others, or, as Farquharson (**116**, 1:79, 268) expresses it: "We, as practitioners, are bound to know all the irregular and abnormal effects of our remedial agents; and whenever we find the sudden appearance of some skin eruption which we cannot readily explain by the usual dermatological reasoning, or even when a more chronic affection is difficult to explain on other grounds, let us never forget carefully to inquire what medicines our patient has been taking." More than once a medicinal rash has been mistaken for an idiopathic affection of the skin, and the unsuspected cause permitted to remain in operation.

Thus far dermatology has mainly considered the symptomatology and pathology of cutaneous affections springing from what might be termed natural, though frequently obscure, causes. The facts contained in the following pages, however, show us that there is great need of careful observation of an entirely different class of cases: those which arise through the agency of means intended to combat disease, but which in turn may become the originators of morbid action. On this point Farquharson (*l. c.* 223) says: "A large mass of evidence from many authentic sources, as well as the results of our own individual experience, must have convinced us that certain aspects of cutaneous irritation follow the administration of particular drugs with sufficient regularity and definition of form to stand in the relation of cause and effect." While it is true that in very many cases these effects are unusual, and are commonly explained as due to some idiosyncrasy on the part of the patient, it is none the less important that they should be recognized at the time of their occurrence, and assigned to their true cause.

They are facts with which we as intelligent physicians should be acquainted, as a portion of our science, even if they do not appear to possess an immediate or frequent application in the practice of our art.

The connection and relationship between the so-called physiological action of drugs and their therapeutic employment, is a question that of late years has assumed considerable importance, and one that in the near future will probably invite still more thorough investigation. At present, the well-ascertained facts bearing on these points are too few in number to warrant any general induction that can be extensively utilized in practice. We know, for instance, that arsenic, which during the past fifty years has been more extensively used in the treatment of skin diseases than almost any other drug, is credited by many competent observers with the power of also causing cutaneous eruptions. Iodide of potassium, likewise an exanthematogenic drug, is found useful in certain cutaneous lesions, and especially in those of a syphilitic nature. On the other hand, bromide of potassium and the cinchona derivatives, which exert a marked influence on the skin in health, have as yet received little attention as therapeutic agents in the treatment of idiopathic diseases of this organ. How far those drugs which display a predilection for the cutaneous tissues can be made to subtend a useful purpose in this connection, is a question that can only be settled by experimentation. It is a field of research, however, that should not be neglected, and all facts that may be ascertained should be placed on permanent record, as our successors may perhaps be able to utilize them, even if we are not prepared to do so to the fullest extent ourselves.

Under the headings **C** and **D** many statements will be found recorded in what may appear to the reader too brief a manner, with too little detail, especially as to the manner in which the drugs have been or are to be employed. In the case of the more important articles of the materia medica, this deficiency is supplied in PART II., in connection with the diseases in which they are found useful. In regard to the others, it was thought better to simply indicate the original sources of information, thus saving space for matters of more practical importance.

Under the heading REMARKS, the preparations officinal in the United States Pharmacopœia are given, and in addition, such other information as appeared to the author desirable to incorporate in this place. It should be remembered that all of the drugs mentioned in the United States and British Pharmacopœia, and many others in addition, are more or less fully considered in the United States and National Dispensatories; and in these works of reference, one or the other of which is in the hands of almost every physician, will be found the effects of the drugs on other parts of the body than the skin—effects that should always be borne in mind when making use of the drug in question for therapeutic purposes, as they may sometimes serve as contra-indications to the cutaneous applications of the drug in particular cases.

DRUGS.

ABSINTHIUM (*Artemisia Absinthium*, *L.*), U.S.

D. Atonic and scrofulous ulcers, **26**, 8.

ACANTHUS MOLLIS, *L.*; P.

C. In affections of the skin accompanied with heat and itching. Gilibert, **26**, 9.

ACIDUM ACETICUM, U.S.

A. Diaphoretic, **6**, 362; **36**, 1: 10.

D. Hyperidrosis, **6**, 367.
Scabies, **24**, 2: 462.
Psoriasis, **10**, 1: 270; Cummin, **44**, 38.
Trichophytosis, Wigan, **138**, 2/43, 865; **10**, 1: 270.
Warts, corns, callosities, **43**, 202.
Nævus, Behrend, **44**, 39.
Lupus erythematosus, **97**, 2: 318.
Clavus, condylomata acuminata (injected), **208**.
Clavus, verrucæ, and molluscum contagiosum, **210**.
Warts, **207**.
Pruritus, **201**; **209**.
Eczema rubrum (*ib.*).

REMARKS.—The power possessed by acetic acid of slowly dissolving epithelial tissues when kept in prolonged contact with them is frequently utilized for the destruction of horny excrescences of all kinds. For this purpose the pure glacial, rather than the weaker officinal acid, should be employed; and if dilution should be desired, this may often be advantageously effected with a menstruum, composed in part of glycerine. I have found equal parts of glacial acid and glycerine of service in the smaller patches of erythematous lupus. Acetic acid differs in its action very materially from the other so-called caustic acids and caustics generally. On horny growths it exerts a solvent action, without the production of a distinct slough or eschar, while in lupus it appears to stimulate absorption of the morbid deposit. The direct injection of acetic acid into the substance of morbid and more especially malignant growths, has not proved so serviceable as it was at first supposed would be the case. The tumor might be destroyed or greatly lessened, but secondary developments of the disease, it is asserted, appear more frequently than when other methods of eradication have been employed.

The officinal preparations are: *Acidum Aceticum*, and *Acidum Aceticum Dilutum.*

ACIDUM BENZOICUM (*Styrax Benzoin, Dryan.*), U.S.

A. Diaphoretic, **17**, 345.

REMARKS.—The principal use of benzoic acid in cutaneous therapeutics is in connection with ointments and cerates. The addition of ten to twenty grains to the ounce tends to prevent rancidity, and proves useful as a mild stimulant when such action is desirable. Benzoic acid is soluble in about 200 parts of water.

ACIDUM BORACICUM, B.

D. Trichophytosis, Watson (Ind. Med. Gaz.), **137**, 2/75, 750.

REMARKS.—Boracic or boric acid is soluble in 26 parts of water, and is credited with antiseptic and germicidal properties, a claim which is not yet sufficiently substantiated.

ACIDUM CARBOLICUM, U.S.

B. If strong carbolic acid be applied to the surface of the skin, an immediate tingling and burning sensation is experienced; the spot affected becomes white, the neighboring skin displays a red areola, and the symptoms are similar to those attending the application of a powerful caustic. In the course of a few days there is exudation from the surface attacked by the acid. The irritation persists for a fortnight or three weeks. A more superficial application of the acid is found to diminish the sensibility of the skin so much that incisions into the part, and even the application of caustic potassa, give but little pain, **10**, 1: 778.
Anæsthesia, **9**, 310; Wilson **135**, 4: 5.

C. Pruritus, Binz, **114**, no. 43, '70, 522; Kohn, **111**, 1: 234; Güntz, **111**, 1: 631; Rezek, **176**, Sep. 3, '76.
Psoriasis, Rezek, **176**, Sep. 3, '76; Kohn, **111**, 1: 234; Liveing, **137**, 1/70, 602; **56**, 153; **98**, 68.

C & D. Pruritus, prurigo, and psoriasis, **210**.

D. Acne, Brown, **116**, 2/78, 162.
Eczema, **5**, 265; **17**, 1228; Coleman, **137**, 1/69, 292.
Psoriasis, **5**, 265; **17**, 1228; McNab, **137**, 1/70, 408.
Pruritus, **5**, 265; **17**, 1228; **97**, 1: 103; **201**; **203**.
Trichophytosis, Rhodes, **116**, 2/77, 106; Cottle, **116**, 2/77, 136.
Hyperidrosis, **98**, 44.
Lupus erythematosus, **97**, 2: 319.
Lupus vulgaris, **97**, 2: 371.
As a local anæsthetic, **201**.
Rhus poisoning, **203**.
Furuncle (a drop of the pure acid inserted in the suppurating cavity), **204**.

REMARKS.—The fact that carbolic acid mixes well with water, alcohol, glycerine, oil and fats, has led to its very frequent use in cutaneous diseases, and it has certainly been found useful when administered internally in some cases of pruritus of obscure origin, and of psoriasis which have resisted other means. It may be given in water or glycerine, or made into pills with soap, in doses of one to five grains daily. In larger doses its effects must be very carefully watched, as poisonous symptoms may suddenly develop. Externally it may be freely used if diluted, but toxic symptoms have arisen even when thus employed.

The officinal preparations are: *Aqua Acidi Carbolici; Glyceritum Acidi Carbolici; Suppositoria Acidi Carbolici;* and *Unguentum Acidi Carbolici.*

ACIDUM CHROMICUM, U.S.

B. Applied to the epidermis in small quantity it colors it yellow. If the application is prolonged, the acid disorganizes the skin, without producing vesicles or serous effusion (Magitot).*

D. Lupus, **10**, 1: 298; Purdon, **135**, 2: 40.
Warts, corns, trichophytosis, Purdon, *loc. cit.*
Condylomata, **43**, 324.
Hairy moles, **203**.
Chancres and chancroids, **210**.

REMARKS.—The caustic effects of chromic acid are very superficial It does not burn deeply like some of the other acids, but simply destroys a thin layer of tissue with which it is in immediate contact, and hence necessitates frequent application if much depth of tissue is to be destroyed. In some respects its action is the reverse of that of acetic acid (*q. v.*), and instead of softening and dissolving, it tends to harden the tissues to which it is applied. It may be used in substance or diluted with water.

ACIDUM CHRYSOPHANICUM (*Andira Araroba, Aguiar*), N.D.

B. Applied to the scalp, caused a papular eruption on the face, Farquharson, **116**, 1/79, 223.

D. Trichophytosis, chromophytosis, Fayrer, **146**, 2/74, 470; Lima, **146**, Mar. 6, '75; Smith, **124**, '79, 193.
Psoriasis, Squire, **116**, Dec. 23, '76; Stansbury, **110**, 4: 297; Benozzi, **131**, '78, 231; and many others.

REMARKS.—It is barely six years since this drug was fairly brought to the notice of European physicians as a parasiticide of remarkable energy. Later Squire, of London, discovered its efficacy in psoriasis. In parasitic affections of vegetable origin it has been found exceedingly useful when they are purely superficial, as in chromophytosis and trichophytosis corporis. On the other hand, when the hair follicle is deeply invaded by the fungus, as in trichophytosis capitis or barbæ, it has in my experience proved ineffective. In psoriasis, however, it has justly earned a high reputation, and is unquestionably the most efficient external agent we now possess for the removal of this affection. Although somewhat irritant it may be freely applied to the general surface, but should be used sparingly and with caution to the face. This substance is strictly speaking not an acid, but a neutral body, for which the more appropriate name of *chrysophan* has been proposed. Like many other bodies of this nature it is exceedingly insoluble, dissolving in small proportion only in alcohol, ether, and petroleum derivatives. It is usually employed in the form of ointment, containing from 5 per cent. to 15 per cent. of chrysophan.

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* ROUSSEAU—Contribution a l'étude de l'acide chromique, etc. Paris, 1878.

ACIDUM CITRICUM (*Citrus Limonum, Risso*), U.S.

D. Dilute solutions of citric acid are sedative when applied to sanious and gangrenous ulcers (Brandini), **26**, 325.
Lupus (Herzfelder), **24**, 2: 469.
Relieves the pain of cancer, Willis, **137**, 1/66, 504.

REMARKS.—The only officinal preparation is the *Syrupus Acidi Citrici.*

ACIDUM FORMICUM, U.S.D.

B. A concentrated solution produces in a few minutes severe burning pain, followed by exudation and swelling, with intense redness of the surrounding parts, **9**, 549.

REMARKS.—I have occasionally found formic acid, largely diluted, of service in obstinate pruritus. It may be employed as a lotion or in ointment containing 3 per cent. to 5 per cent. of acid.

ACIDUM GALLICUM (*Quercus infectoria, L.*), U.S.

C. Purpura hemorrhagica, **10**, 1: 230.

REMARKS.—The effects of gallic are quite similar to those of tannic acid. As an astringent to weeping surfaces it may be mixed with lycopodium or starch.

The only officinal preparation is the *Glyceritum Acidi Gallici.*

ACIDUM HYDROCYANICUM, U.S.

A. Urticaria, Smyth, **137**, 2/45, 507.

B. Applied to the unbroken skin, it is doubtful whether hydrocyanic acid is absorbed, but in contact with a wound or abrasion and with the mucous membrane, it diffuses into the blood with great rapidity, **4**, 402.

D. Pruritus, **4**, 405: **44**, 337; **82**, 126.
Painful tumors, **17**, 1238.
Hyperæsthesia, prurigo, eczema, psoriasis, **43**, 474.
Lupus erythematosus, **97**, 2: 318.

REMARKS.—Pure hydrocyanic acid is too poisonous to be used at all, and even the officinal *Acidum hydrocyanicum dilutum*, which contains but 2 per cent. of pure acid, should be further diluted before application to a denuded or abraded surface. It may be used in a simple lotion, or one containing a little glycerine, or may be mixed with ointment.

ACIDUM NITRICUM, U.S.

A. A fine pustular eruption sometimes appears upon the skin, **10,** 1: 272.

B. Applied to the skin causes, in a few seconds, a much greater pain than any other acid. If it be immediately washed off, some burning remains, and the skin turns white, and later yellow, **43,** 196.

C. Psoriasis, impetigo, acne, erythema nodosum, and other eruptions in which the skin affection is symptomatic of imperfect digestion and assimilation, **4,** 67.
Pemphigus, **86,** 1: 277.
Syphilis, Rodgers,* **202**; **208**; **210**; (H.G.P.).

D. Cancerous ulcers, hospital gangrene, chronic eruptions, **1,** 964–5.
Nævus, **203.**
Chancroids.
Condylomata.

REMARKS.—In cases of long standing or relapsing eczema, when accompanied with imperfect assimilation and urinary deposits, nitric, as well as the other mineral acids, is sometimes of decided service. At one time it was much used in tertiary syphilis, but gradually fell into unmerited oblivion. Dr. John R. B. Rodgers (*loc. cit.*) speaks of it as follows: "The nitric acid, by administering a considerable quantity of oxygen, and by acting on the glandular system, assisted the operation of mercury. It is only when the system is disoxygenated that nitric acid is of service. I cannot say that I ever saw the nitric acid of itself, and without the use of mercury, cure large and extended syphilitic ulcers; although I have seen it remove ulcers which a long-continued use of mercury could not overcome. In these cases the venereal virus had been destroyed, and the ulcers were kept up from irritability and debility of the part and of the system." Whatever may be the explanation, nitric acid internally administered, even in quite small doses, will sometimes check the progress, and promote the healing of syphilitic ulcerations that fail to respond to the usual doses of the more commonly employed specifics, mercury and iodide of potassium.

Externally, its most frequent application is as a caustic to chancroids, mucous patches, condylomata, and ordinary verrucæ. It is also frequently employed in phagedenic ulceration and sloughing wounds. In chancroids it yields in efficacy, we think, to nitrate of zinc, and in rapidly extending ulcerations, to bromine. In France the "*pommade oxygénée*" (nitric acid, 1 part; simple ointment, 10 parts) is sometimes employed in chronic eczema.

Beside the pure acid the only officinal preparation is the *Acidum Nitricum Dilutum.*

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* Transactions of the Medical Society of the State of New York, 1813. Reprint, page 68.

Acidum Nitro-muriaticum, U.S.

C. Psoriasis, impetigo, acne, erythema nodosum, **4**, 67.
Syphilis, **210**.

Remarks.—Its value in connection with eczema and psoriasis, more especially in cases when there is manifest chronic hepatic derangement, is well established. Its *modus operandi*, like that of nitric acid, is obscure. The only officinal preparation is the *Acidum Nitro-muriaticum Dilutum.*

Acidum Picricum, P.; U.S.D.

A. Diaphoresis, and yellow tinge to the skin.[*]

B. Erythema, vesicles, pustules, desquamation.[†]

Acidum Pyrogallicum, P.; N.D.

D. Psoriasis, lupus, Jarisch, **148**, '78, 511.
Psoriasis, prurigo, eczema.[‡]
Psoriasis, **204**.
Local pruritus, **209**.
Palmar syphilides, **205**.

Remarks.—Pyrogallic acid is credited with being almost as useful in psoriasis as chrysophan, with the advantage of not staining the skin and the clothing as does the latter substance. Its use, however, is not altogether devoid of danger, as cases of systemic poisoning have been reported from its too free external employment. It is exceedingly soluble in water and glycerine, and may be so used or in ointment (1—30).

Acidum Pyrolignosum, P.; U.S.D.

B. After long application turns the skin brown, **32**, 1: 912.

D. Frost-bite, gangrenous, scorbutic and carcinomatous ulcers, chronic eruptions, etc., **43**, 203.

Remarks.—May be employed in lotion or ointment (1—20 or 30).

Acidum Salicylicum, P.; U.S.D.

A. Petechiæ and ecchymoses, burning, itching and desquamation, Freudenberg, **114**, Oct. 21, '78.

C. Rheumatic eczema, **207**.
Purpura, **210**.

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[*] Parisel—Propriétés thérapeutiques de l'acide picrique. Paris, 1868, p. 22.

[†] Grange—Des eruptions eczémateuses determinées par l'acide picrique. Paris, 1877.

[‡] Bruyère—Recherches cliniques sur l'emploi de l'acide pyrogallique dans le traitement de quelques affections de la peau. Paris, 1879.

D. Eczema, Will, **137**, 2/75, 872.
Psoriasis, Preissmann, **176**, '79, 514; **207**.
Lupus, Ameglio (Gaz. degli Ospedale), **155**, Nov. '79.

ACIDUM SULPHURICUM, U.S.

B. In its more concentrated form it is a powerful escharotic, attacking the tissues violently in consequence of its affinity for their organic bases, as well as for the water with which they are combined, **10**, 1: 301.

C. Hyperidrosis, **1**, 954; **7**, 61.
Furuncles, **201**.
Pemphigus, **86**, 1: 277.
Purpura, **6**, 383 ; **210**.
Lichen, prurigo, urticaria, **13**, 36.

D. Chronic eruptions, **1**, 955.
Scabies, **203**.

REMARKS.—The astringent and tonic properties of sulphuric acid are available in affections of the skin, occurring in debilitated subjects, rather than for any specific action on the skin itself. In the affections above mentioned, more especially hyperidrosis, pemphigus and purpura, it has been superseded by far more efficient remedies.

For external use as a caustic it is sometimes employed in malignant growths, rarely alone, but more frequently made into a paste with finely powdered charcoal or dried sulphate of zinc.

The officinal preparations are *Acidum Sulphuricum Dilutum* and *Acidum Sulphuricum Aromaticum.*

ACIDUM SULPHUROSUM, U.S.

A. Diaphoretic, **13**, 156.

D. Dermatophytic diseases, **10**, 1; 355, **13**, 156; **84**, 285; Jenner, **187**, 2/53, 181; Colan, **41**, 251; Bulkley, **186**, Nov. '77.
Alopecia areata, Jenner, **187**, 2/53, 181.
Eczema, impetigo, psoriasis, pityriasis, **7**, 65.
Ephelis, **209**.
Pruritus pudendi, **10**, 1: 356; Stevens, **157**, Oct. '78, 149.
Eczema palmare, **202**.

REMARKS.—As a local application in certain parasitic affections, sulphurous acid has long enjoyed repute. It is only, however, in the more superficial forms of fungous disease, as chromophytosis and trichophytosis corporis and cruris that it can be depended on, and even in these must be applied a great many times before a cure will be brought about. It is usually employed in the officinal strength, but as it frequently contains a variable amount of sulphuric acid, care should be exercised in its employment.

ACIDUM TANNICUM (*Quercus infectoria, L.*), U.S.

A. Diminishes the insensible perspiration, **3**, 1: 91; **17**, 901.

C. Hyperidrosis, **10**, 1: 224; **17**, 906; **9**, 519.

D. Hyperidrosis, **24**, 2: 491.
Pernio, **6**, 319.
Seborrhœa and dry eczema capitis, **202**.

Remarks.—Beside the applications above given, tannin, diluted with an inert powder, may be used to advantage as an astringent in moist eczema, intertrigo, herpes, fissures, etc. The officinal preparations are: *Glyceritum Acidi Tannici; Suppositoria Acidi Tannici; Unguentum Acidi Tannici.*

Aconitum (*Aconitum Napellus, L.*), U.S.

A. Exerts a special influence on the cutaneous functions, producing diaphoresis with pruritus, and sometimes redness, pustules, and blebs, **1**, 385.
Increase of cutaneous exhalation, with excessive itching and formication, and an eruption of vesicles, **10**, 2: 310.
Diaphoresis, formication and pruritus, **54**, 1: 112.
Irritable vesicular eruption, **5**, 397; Farquharson, **116**, 1/79, 267.

B. Erysipelatous inflammation, **1**, 385.
Redness and vesicles, **54**, 1: 111.
Tingling and numbness of the sensory nerves, **4**, 410.

C. Of the highest value in eruptive fevers, especially in scarlet fever and erysipelas, **4**, 413.
Erysipelas, **2**, 9; **13**, 44; **83**, 96; **94**, 76.
Arrests profuse sweating, Lombard, **94**, 39.
Obstinate scaly eruptions, **1**, 386.
Chronic affections of the skin, **54**, 1: 117.
Pruriginous papular eruptions, Cazenave, **107**, 3: 28.
Pruritus scroti, Jenner, **149**, Oct. 25, '79.

D. Pruritus, **94**, 77; **207** (aconitia).
Acne, **205**.

Remarks.—In affections of the skin attended with febrile action, as some cases of acute eczema, erysipelas, etc., aconite is the first remedy to be thought of. In these cases a few doses given early, certainly exert a marked beneficial action on the course of the disease. In chronic affections in which its long-continued use was advised by the older writers, I have had too little experience to enable me to form any opinion as to its efficacy.

The officinal preparations are: *Extractum Aconiti; Tinctura Aconiti Radicis; Emplastrum Aconiti; and Linamentum Aconiti.*

Aconitum neomontanum, *Willd.;* U.S.D.

B. Vesicates, **23**, 3: 290.

Actæa spicata, *L.* P.; U.S.D.

B. Vesicates, **23**, 3: 199.

ADIANTUM CAPILLUS VENERIS, *L.* F.; U.S.

D. Removes dandruff, increases the hair, and cures alopecia, **52**, 5.

AETHUSA CYNAPIUM, *L.* P.; N.D.

A. Periodic swelling and maculation of the face (Rust's Mag. d. Heilk., '26, 273), **36**, 1: 63.

AGARICUS ALBUS (*Boletus Laricis, L. B.*), G.; U.S.D.

C. Hyperidrosis, **62**, 105.

AGARICUS PHALLOIDES, *Phœb.*

A. Purpuric eruption, Lafargue (Journ. de chirur.-méd.), **42**, 1: 27.

ALLIUM (*Allium sativum, L.*), U.S.

B. Rubefacient and vesicant, **26**, 42; **43**, 330.

ALOES (*Aloe vulgaris, Lam.*), U.S.

D. Fissures and excoriations, sycosis, eczema, etc., **10**, 2: 534.

REMARKS.—Internally aloes finds little employment in dermatology, except when used alone, or in combination with other drugs, as a remedy against habitual constipation which, more frequently in females, so often accompanies chronic cutaneous diseases. The chief active ingredient of Aloes appears to be the substance called Aloïn, which in my experience possesses about twice the laxative power of the former, and its action is accompanied with much less pain. A dose of from one-tenth to one-fifth of a grain after each meal will sometimes effect surprising results in some obstinate cases of chronic eczema, acne, etc., even without the use of other medication. If hepatic, gastric, or other symptoms demand their use, aloin may be combined to advantage with the extracts of belladonna, iris versicolor, leptandra, or hydrastis.*

Externally, aloes has been found useful in the treatment of ulcers, the diluted powder being dusted on, or the aloes employed in the form of an ointment, or in connection with benzoin in the compound tincture of the latter.

The officinal preparations of aloes are: *Pilulæ Aloës; Pilulæ Aloës et Assafœtidæ; Pilulæ Aloës et Mastiches; Pilulæ Aloës et Myrrhæ; Pulvis Aloës et Canellæ; Tinctura Aloës; Tinctura Aloës et Myrrhæ; Vinum Aloës; Suppositoria Aloës.*

ALUMEN, U.S.

D. Exerts a special influence upon ulcerated cancer, acting as a caustic, disinfectant and hæmostatic, **16**, 1: 779.

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* The extracts of the three latter drugs are commonly known in trade under the inappropriate names of "irisin," "leptandrin," and "hydrastin."

Affections of the skin accompanied with profuse and rank perspiration, **17**, 992.
Diminishes the secretion in herpes and eczema, but does not cure, **30**, 171.

Remarks.—The so-called "burnt-alum," *Alumen exsiccatum*, is a more active astringent than the ordinary hydrated salt, and is much used by some for repressing exuberant granulations, and more especially such as so frequently follow extensive burns.

Aluminii Nitras.

D. Pruritus vulvæ, Gill, **157**, '79.

Ammonia, U.S.

A. Diaphoresis, **6**, 542; **7**, 87; **16**, 2: 45.

B. A piece of lint dipped in caustic ammonia produces in one minute a blister; by longer contact, deeper cauterization may be obtained, **16**, 2: 46.
Sensation of heat, followed by redness, vesication and a superficial slough, **3**, 1: 325.

C. Pustula maligna. Caspar (Deutsche Klinik), **135**, 3: 514.
Syphilis, **16**, 2: 48.
Hyperidrosis, **210**.

D. Alopecia, **80**, 163; **203**.
Alopecia areata, **204**.

Remarks.—The officinal preparations are: *Aqua Ammoniæ; Aqua Ammoniæ Fortior; Linamentum Ammoniæ; Spiritus Ammoniæ; Spiritus Ammoniæ Aromaticus.*

Ammonii Acetas, U.S.

A. Diaphoresis, **9**, 1172.

C. Eczema of infants, **202**.

Remarks.—The only officinal preparation is the *Liquor Ammonii Acetatis.*

Ammonii Arsenias, U.S.D.

C. Eczema, **58**, 110.

Remarks.—This arsenical preparation, though strongly recommended by Biett and Cazenave, is rarely used at the present time. Whether it is as frequently useful as the potassium and sodium salts is a question that cannot at present be answered, nor can the special indications for its use be pointed out. A convenient form for its administration would be a 1 per cent. solution in water, the ordinary dose of which would be from one to five minims. Biett used a weaker solution.

There are three arseniates of ammonium; the soluble acid salt is the one to be employed.

AMMONII CARBONAS, U.S.

B. In concentrated solution, dissolves the horny cells of the epidermis, and if long applied causes inflammation, **43**, 436.

C. Psoriasis, Cazenave, **107**, 4: 28; Anderson (**193**, '65), **44**, 63.
Squamous affections, Chausit, **107**, 3: 315.

REMARKS.—The facts stated under **B** would suggest its use as an external application in psoriasis, ichthyosis, and other affections characterized by excessive epithelial formation.

Internally, its use is advisable in cases requiring a stimulating antacid. It should not, however, be continued for any great length of time, for, although at first exciting the digestive and assimilative functions, it, if given in excess, enfeebles them.

AMMONII CHLORIDUM, U.S.

C. Keloid, **81**, 84.

D. Chronic eruptions, ill-conditioned ulcers and scabies, **1**, 492.
Warts, **204**, (H.G.P.)
Erysipelas, erythema, ecchymosis, **210**.

REMARKS.—If this drug, or any other, exerts the slightest beneficial influence over keloid, it is a fact of the first importance; as the writer is unacquainted with any medical agent or surgical procedure that can be depended on to effectually remove or cure this disease.

Externally, we have found it of service in corns and callous patches. It should be frequently applied in saturated solution.

AMMONII IODIDUM, U.S.

A. Petechial spots on both legs. Ringer, **162**, Mar. '72, 129.

C. Syphilis.

D. Erysipelas, Curran, **135**, 4: 36.
Psoriasis, **65**, 376.
Lupus, **70**, 172.
Trichophytosis, (H.G.P.)
Pruritus ani, **209**.

REMARKS.—This salt is rarely used internally, except in syphilis as a substitute for iodide of potassium in cases where this latter disagrees.

AMMONIACUM (*Dorema Ammoniacum, Dou.*), U.S.

B. Papular eruption, **7**, 666.

D. Resolution of tumors, **1**, 661.

REMARKS.—Ammoniac as an external application has long been credited with power of discussing certain indolent and scrofulous tumors. It is usually employed in the form of the officinal *Emplastrum Ammoniaci* or in conjunction with mercury in the *Emplastrum Ammoniaci cum Hydrargyro.* The latter is generally supposed to be more efficient than the former, but if applied to an extensive surface may induce ptyalism and other symptoms of mercurial intoxication.

AMYGDALA AMARA (*Amygdala communis, D. C.*), U.S.

A. In many instances gives rise to a copious eruption upon the skin resembling urticaria, **10**, 1: 135.

D. (In emulsion) to remove freckles, **10**, 1: 136.
" " as an antipruritic, **1**, 911; **203**.

REMARKS.—The emulsion of almonds forms a soothing and convenient vehicle for many other drugs, but possesses slight, if any, remedial virtues of its own.

AMYL NITRIS, U.S.D.

A. Flushes the face, and increases the heat and perspiration of the head, face and neck, **5**, 311.

C. Ringer (7th Am. Ed. p. 370) makes the following statement: "A woman, perhaps from the sudden arrest of menstruation, or through depraved health, or nervous depression, or more frequently, at the change of life, suffers from frequent attacks of flushings or 'heats' starting from various parts, as the face, epigastrium, etc., thence spreading over the greater part of the body. The face and even the back of the hands, are deeply reddened, the veins of the hands in some cases dilating to double the previous size. Although the patient feels deeply flushed, sometimes the skin remains natural. The sensation of heat may be so urgent that the patient opens her clothes, or removes the greater part of the bed covering, and even throws open the window in the coldest weather. These heats may last a few minutes only, or an hour or more, and may be repeated many times a day. They are generally followed by perspiration, often very profuse, at other times the skin remains dry, the attacks are then commonly termed 'dry heats.' The 'heats' are often accompanied by great throbbing throughout the whole body and followed by much prostration, the patient seeming scarcely able to rouse herself. After the heats pass away, the skin becomes cold and clammy, and may turn very pale. The heat, exertion, or excitement may bring on these heats, and such a patient generally complains of cold feet, and sometimes cold hands. The flushings are occasionally peculiarly and abruptly limited, reaching to the thighs, knees, or elbows, and while all the parts above these feel burning hot, the parts below feel icy cold; sleep too is often broken, the patient waking with frequent starts, and in the morning feeling unrefreshed. Sometimes they occur chiefly at night. In many cases palpitation or flutterings at the heart occur on the slighest excitement, or even without apparent cause.

> "Nitrite of amyl will prevent or greatly lessen these flushings or 'heats' and avert the profuse perspiration, throbbing of vessels, and great prostration. . . . For the symptoms just described I have generally administered this drug by the stomach, though inhalation answers as well. . . . It may be dissolved in rectified spirits, two minims to the drachm, and of this the dose is three to five drops on sugar every three hours, with an additional dose as soon as the flush begins. Relief generally ensues immediately, but sometimes not till the medicine has been taken for a week."

REMARKS.—Cases of rosacea sometimes present themselves to the physician in which these frequent flushings of the face are a marked feature of the trouble, and one of which the patient is apt to complain. There is little doubt that they aggravate the cutaneous lesion, and tend to prolong its continuance. The chronic congestion of the skin is temporarily increased by each attack and if they are of frequent occurrence, increase in severity, and extension of the disease may be anticipated. They naturally oppose an obstacle to the success of what would ordinarily be rational and effective treatment. It is of the first importance, then, that the tendency to them should be checked. Among the means adapted to this end I have found the nitrite of amyl, as pointed out by Ringer, occasionally successful. I usually administered from one to five minims of a 1 per cent. alcoholic solution in a teaspoonful of water, or else give sugar globules (each 3 or 4 mm. in diameter) which have been saturated with the pure nitrite. A closely corked vial of such globules is the most convenient form for the administration of the remedy, one or two being taken at a dose.

AMYLI IODIDUM (*Iodide of starch*), U.S.D.

C. Lupus erythematosus, McCall Anderson, **116**, 279, 293.
Late syphilis, **202**; **203**; **205**.

D. Lupus, **84**, 195.
Syphilis, fissures of the nipple, **203**.

REMARKS.—As a matter of caution it may be stated that there is an *iodide of amyl* which should not be mistaken for the drug here considered.

ANACARDIUM (*Anacardium occidentale, L.*), F.; U.S.D.

B. Pain, itching, red papules changing to pustules, crusts, desquamation. Stickney, **140**, '44, 133, (H.G.P.)

D. Maculæ, scabies, impetigo, **20**, 127; **31**, 62.
Verrucæ, **2**, 289; **23**, 2: 248; **35**, 97.
Dartrous eruptions, **51**, 1: 184.
Leprosy, **2**, 289; Bakewell, **146**, 1/71, 233.

REMARKS.—The black oily substance extracted from the rind of the Cashew nut is known under the name of *Cardol* or oil of Cashew. Of cardol there are two varieties: the *Cardol vesicans* derived from the plant here considered, and the *Cardol pruriens* extracted from the Anacardium orientale. Both are extremely irritant to the skin, but the former is the more active. We have used both varieties in ointment as a local stimulant application in sluggish eczemas and in alopecia areata, but do not find that they possess advantages over other stimulating substances. The uses of cardol in leprosy will be considered in the second part of this book.

ANEMONE NEMOROSA, L. F.; U.S.D.

B. Redness, vesicles, ulcers, **23**, 3: 329; **26**, 67; **36**, 1: 174.

ANGELICA SYLVESTRIS, L.

D. The seeds destroy pediculi on the head, **31**, 35.

ANISUM (*Pimpinella Anisum, L.*), U.S.

B. Slightly irritant, **2**, 401.
The oil inflames the skin, **6**, 630.

D. (The oil) pediculi, **1**, 670.
Pediculi, chromophytosis, trichophytosis, **6**, 630.

REMARKS.—The officinal preparations are *Oleum Anisi* and *Spiritus Anisi.*

Their uses are sufficiently indicated above.

ANTIMONII CHLORIDUM, B.

B. The effects are caustic, producing a white, soft, thick slough, **1**, 1166.
It burns deeply rather than widely, **9**, 471.

D. Poisoned wounds, malignant pustule, **9**, 471.
Acne, **74**, 267.
Malignant growths.
Venereal warts, **209**.

REMARKS.—The butter of antimony has long been used, either alone or in connection with other caustic agents, as an escharotic in malignant growths; it was a component of the once famous Landolfi's paste.

ANTIMONII ET POTASSII TARTRAS, U.S.

A. Diaphoresis.
In cases where it has been taken for some time, it causes a pustular eruption upon the skin, **13**, 54.
Eruptions on different parts of the body, **178**, Mar. '59, 138.

B. In ointment excites a characteristic inflammation, at first papular, then vesicular, and lastly pustular. The rash runs the course of the eruption of small-pox, and in each stage simulates it very closely, **5**, 210.
A superficial and slight redness is almost the only effect of the watery solution; but when the medicine is retained in contact with the skin by being mixed with fat or some adhesive substance, it at first produces redness, and afterwards pustules which closely resemble those

of small-pox, like which they form scabs, and may leave indelible scars behind them. This eruption is usually mature on the fourth or fifth day from its first appearance. Sometimes, in consequence of the delicacy or diseased state of the skin, or the quantity of the salt applied, large or deep sloughs are produced, and create a permanent deformity. They may even prove fatal, **10**, 2: 423.

Pustules very painful, **22**, 2: 258.

Applied in friction on a distant part of the body, and may produce an eruption on the genitals without direct contact. Siméons, **129**, '48, 192.

C. Squamous affections, **41**, 141.

D. Alopecia areata (sol. gr. v.—℥ i.), Beauchamp, **124**, Jan. '34.
Nævus, Bateman, **137**, 2/69, 660.

Remarks.—The statement of Siméons (*supra*) and others, to the effect that tartar emetic applied to one part of the body may, without direct contact, induce an eruption on another part, has given rise to much discussion. The fact of these secondary eruptions is beyond dispute, but the commonly assigned explanation is that a small portion of the tartar emetic has been mechanically transferred by the patient's hands from the site of the original application to the parts subsequently affected. This view is greatly strengthened by the fact that the secondary eruption most frequently appears on parts to which the hands are most likely to be applied, namely, the face and the genitals. On the other hand, the occurrence of eruptions on the skin, from the internal use of tartar emetic, would give a certain plausibility to the view that when tartar emetic is applied to the surface a portion of it may be absorbed and give rise to an eruption upon parts for which it had a special affinity. Recent physiological experiments on frogs have shown that tartar emetic exerts a very special influence on the skin. One other explanation has been offered, namely, that the irritation of the original application is transmitted by reflex action to distant parts, and thus excites the secondary eruption.

Antimonium.

A. Chronic poisoning is marked by great tendency to profuse sweats and irritability of the skin, leading to peculiar eruptions and even to ulceration, **43**, 283.
Urticaria, **69**, 182.

Remarks.—The authors cited simply attribute the effects mentioned to "Antimony" without specifying particular preparations.

Antimonium Crudum (*Antimonii Sulphuretum*, U.S. Black Sulphuret of Antimony).

A. Exerts a powerful action on the capillary circulation of the skin, **36**, 5: 205.
Inflamed pustular eruption on the face, Wepfer (de cicuta et antimonio), **42**, 1: 372.
(In horses) increased exfoliation of epidermis, **36**, 5: 205.

C. Eczema, **64**, 40.
Psoriasis, **86**, 2: 125, (H.G.P.)
Useful in chronic squamous affections, **54**, 1: 232–3 and 248–9; Cazenave, **107**, 4: 56.
Papilloma diffusum, (H.G.P.)

REMARKS.—I have retained the older rather than the modern pharmaceutical name, in order that the preparation here referred to shall not be confounded with *Antimonium Sulphuratum* (golden sulphuret of antimony), quite a different substance, also contained in the pharmacopœia. I have used the black sulphuret of antimony to a very considerable extent in the treatment of diseases of the skin,—and am of opinion that the confidence reposed in it by the practitioners of the last and the early part of this century was not unfounded. It has appeared to me to very closely resemble arsenic in its effects, and to be of special service in affections characterized by epithelial proliferation and hypertrophy. As the drug is exceedingly insoluble (in water), it may be safely given in the doses prescribed by the older writers (see Formulary), or, as I personally prefer to use it, in the form of trituration with milk sugar. In this manner I employ it in about the same doses as would be appropriate for the administration of arsenious acid.

APIUM PETROSELINUM, *L.;* U.S.D.

D. The powdered seeds destroy pediculi capitis, **32**, 1: 619.

ARALIA NUDICAULIS (*Aralia nudicaulis, L.*), U.S.

D. Foul ulcers, zoster, and erysipelas, **31**, 43.

ARALIA SPINOSA (*Aralia spinosa, L.*), U.S.

A. Diaphoretic, **49**, 2: 251.

ARGENTI CHLORIDUM.

D. Psoriasis, **93**, 697.

ARGENTI NITRAS, U.S.

A. Bluish-gray color to the skin after long continued use, **1**, 1, 210; **6**, 302; **18**, 45; **29**, 356, and many others.
Purplish-slate color, Purdon, **135**, 2: 44.
Dusky lead color, **210**.
Steel-gray color, most marked on the face, more marked on flexor than extensor surface of limbs. The silver deposit was easily distinguished in thin sections under the microscope. Patient had taken about 3½ ounces of Argenti nitras. Frommann, **112**, '59, 17; 135.
Grayish-black color on the face, later grayish-blue, most deeply marked on the face. On microscopical examination of the skin after death the deposit of silver was easily distinguished. The patient had taken 5,672 pills, containing an aggregate of 34 grammes of nitrate of silver. Riemer, **108**, '75, 298.

When taken into the stomach, it is, after conversion into chloride of silver, as some maintain, carried by the blood-vessels to the skin, where, by exposure to light, it gives to the integument a violet hue. Others suppose that it is absorbed as nitrate of silver, and is converted into a chloride in the rete mucosum, while still others believe the chloride to be reduced by the action of light and metallic silver deposited, **10**, 1: 363.
Pruritus, erythema, papules, Charcot, **89**, 75.

B. When moistened and lightly applied to the skin the track of its passing soon becomes violet-brown, and at last black. When more prolonged application is made, a small slough may ensue, **16**, 3: 74.

D. Abortion of variolous pustules, **16**, 3: 85.
Pruritus pudendi, **5**, 180; and others.*
Vascular and exuberant granulations, **3**, 1: 359, and others.
Erythema nodosum, psoriasis, Chapman, **138**, Oct. 14, '37.
Psoriasis (Hebra), Sycosis (Warion), **17**, 967.
Burns, Skey, **137**, Aug. 27, '70, (H.G.P.)
Eczema, Piffard, **143**, Oct. 26, '78.
Eczema ani, **202**.
Pemphigus, zoster, Duchesne-Duparc, **113**, '46, 84 *et seq.*
Chromophytosis, **208**.
Furuncle (*ibid.*); Piffard, **88**, 144.
Erysipelas, Duchesne-Duparc, **113**, *loc. cit.*
In erysipelas: "The affected part should be well washed with soap and water, then with water alone, to remove every particle of the soap, then to be wiped dry with a soft towel. *The concentrated solution, of four scruples of the nitrate of silver to four drachms of distilled water, is then to be applied two or three times on the inflamed surface, and beyond it on the healthy skin to the extent of two or three inches.* The solution may be applied with a small piece of clean linen, attached to the end of a stick, the linen to be renewed at every subsequent application. As the solution of the nitrate of silver is colorless, it is necessary to pass a little linen just moistened over every part where it has been used, in order to be equally diffused, so that no part may be left untouched. In about twelve hours it will be seen whether the solution has been well applied. If any inflamed part be unaffected, the solution must be immediately reapplied. Sometimes, even after the most decided application of the nitrate of silver, the inflammation may spread; but it is generally much less severe, and is eventually checked by repeated applications. It is desirable to visit the patient every twelve hours, until the inflammation is subdued." Higginbottom, **162**, Jan. '69, 34.
In superficial inflammations other than erysipelatous, nitrate of silver may often be used to great advantage, **18**, 49.
Lupus vulgaris, **97**, 2: 367, (H.G.P.)

REMARKS.—Internally, nitrate of silver is not used in dermatology, so far as I am aware. It is possible, however, that it might prove useful in some of the pruriginous or other affections depending on pre-existing nerve lesion.

Externally, it has manifold uses, among which are the repression of exuberant granulations, and the stimulation of sluggish erosions and ulcerations. The relief which a 2 per cent. to 3 per cent. solution affords, when applied to recent burns of the first or second degree, first pointed out, I believe, by Mr. Skey, I have frequently verified. The action of nitrate of silver as a caustic, either in saturated solution or in the solid form, is exceedingly mild and superficial, and cannot be depended on when anything more than surface action is desired. A very common but improper application of it is to recent venereal sores. In chancres it is uncalled-for, and does more harm than good; in chancroids it is inefficient. It is also sometimes applied to the surface of lupoid and other malignant or semi-malignant ulcerations. Here again it is usually inefficient, and not unfrequently stimulates the disease to increased development. There is, however, an effective method of employing it in lupus, which will be considered in connection with that disease.

ARISTOLOCHIA CLEMATIDIS, *L.;* U.S.D.

D. Ulcers, **23**, 4: 469.

ARMORACIA (*Cochlearea Armoracia, L.*), B.

A. Diaphoresis, **2**, 157; **7**, 803.

B. Redness and vesication, **2**, 157.
The acrid oil inflames the skin, **49**, 1: 229.

C. Rosacea, Ker, **137**, 2/64, 199.

D. Rosacea (the fresh leaves), **203**.

ARNICA (*Arnica montana, L.*), U.S.

A. Diaphoresis, with erythema of the chest, **1**, 351.
Diaphoresis, **6**, 605; Jörg, **17**, 417; **22**, 1: 100; **54**, 1: 383.
Pruritus, **48**, 126.
Prickings in the skin, **22**, 1: 100.
Formication, **32**, 2: 47; **34**, 1: 162.

B. The flowers, after six or eight hours, cause itching, burning, and slight redness, **36**, 1: 229.
Erysipelatous, or peculiar violet-colored eruption, not produced when an aqueous preparation is used, but only with the alcoholic, **2**, 306.
Itching, congestion, papules, vesicles, excoriations, crusts and scales, White, **115**, '75, 61.
Erythema, vesicles, pustules, Earle, **186**, Sept. '77; **209**.
Redness, papules, vesicles, and excoriations, Harnden, **152**, Dec. '78, 357.
Redness and vesicles, **202**; **204**, (H.G.P.)
Purpura, Schmidt, **32**, 2: 54.

C. and **D.** Urticaria, **208**.

D. Pernio, Purdon (**142**, '65), **44**, 106.
Eczema, Piffard, **143**, Oct. 26, '78.

Remarks.—The officinal preparations of arnica are: *Extractum Arnicæ; Tinctura Arnicæ;* and *Emplastrum Arnicæ*, all of which are made from the flowers. The occurrence of erysipelatoid inflammation of the skin following local applications of the tincture of arnica has been noticed for many years, and is usually attributed to some irritant ingredient pertaining to the arnica. It is possible that this is not the case, but that the irritant action is due to a foreign body accompanying the arnica flowers, namely the larvæ of the *Atherix maculatus.* As early as 1811, Mercier* noticed that the ingestion of preparations of arnica flowers was sometimes followed by symptoms of grave irritation. On further investigating the matter he found that the flowers were frequently infested with the eggs, larvæ and remains of an insect. These he isolated and from them obtained an extract which he found acrid and irritating. He believed that the untoward effects of arnica are thus caused, as they were not observed when flowers free from insects were employed. Later, Buchner† also found the young caterpillars (*raupen*), and at his instance Prof. Oppel studied their development and ascertained that they were the young of the *Atherix maculatus.* In examining arnica flowers the writer has met with the insect remains referred to, in some specimens quite abundantly. The puppæ and the adult fly (life size and magnified) will be found figured by Mann,‡ in company with his plate of the arnica plant.

All of the cases of arnica poisoning that have fallen under my own notice have followed the use of the officinal tincture of the flowers; on the other hand, I have very frequently employed a tincture of the root without accident. If a wider experience confirms the suspicion that the atherix and not the arnica is really the cause of the local irritation, the use of preparations of the root should supplant that of the flowers.

Arsenic—(Acidum Arseniosum, U.S.; Liq. Potassi, Arsenitis, U.S.)

A. Persistent pruritus. De Haen.§
Grayish discolorations; Cazenave (Jour. hebd. '28), **39**, 80.
Brownish discolorations, v. Veiel (**170**, '60), **39**, 83; Mayer (Ann. de la Soc. de méd. d'Anvers, '44), **39**, 84; **47**, 195; Charcot, **117**, June 30, '64; **41**, 137.
Rubeoloid eruption, Thomson (Med. Essays and Obs. 1747), **39**, 31; Macnab, **146**, 1/68, 297; Fox, **146**, 1/68, 327; Begbie, **126**, May, '58; **41**, 137.
Erythema, Kellie, **127**, April, '08; Hooper, **187**, '47, 508; Champouillon, **178**, '50; Marchand (Ann. méd. de la Flandre, '51 and '54), **39**, 19; Vaudey (Thèse de Strasbourg, '70), **39**, 20; Fox, **137**, 1/67, 455; **209**.
Urticaria, Fowler;‖ Kersten (**120**, '51), **39**, 27.
Miliary eruption, Hahnbaum (Henke's Zeitsc. '21), **39**, 41.
Vesicular eruption, **209**.

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* Annales de Chimie, 77: 137.
† Repertorium für die Pharmacie, 3: Nürnberg, 1817.
‡ Deutschlands wildwachsende Arzney-Pflanzen. Stuttgart, 1828.
§ Ratio medendi. Pars, ix. Vienna, 1764, p. 252.
‖ Medical reports of the effects of Arsenic. London, 1786, p. 97.

Furuncles, Vaudey (*loc. cit.*), **39**, 76; **47**, 195; Girdlestone, **141**, '06, 297; **203**.

Petechiæ, M'Leod, **127**, Oct. '19, 554; **54**, 1: 396.

Lichenoid eruption, Fox, **137**, 1/67, 455.

An eruption which gradually put on the character of eczema, Christison, **126**, Jan. '56, 630.

Papulo-erythematous eruption, dry and livid on wrists and neck,—general papular eruption on trunk and extremities, with pruritus, **205**.

Eruption of clusters of vesicles on an inflamed base, extending from lower part of the arm, down the back of forearm and hand, including back of the fingers, Finlayson, **162**, July, '78.

Herpes labialis and preputialis, Hutchinson, **146**, 1/69, 408.

Zoster, **4**, 105; Sisson, **162**, '69, 70; Duffin, **137**, 2/69, 508; Finlayson, *loc. cit.;* Hutchinson, **146**, 2/68, 722; Fox, **137**, 1/67, 455.

Defluvium capillorum et unguium, **4**, 105; **7**, 195; **1**, 1243; Girdlestone, *loc. cit.*

Dryness of the skin, heat and itchiness of the eyelids, minute papular rash followed by fine desquamation, Begbie, **126**, May, '58, (H.G.P.)

Soles of the feet and palms of the hands become a little hard and corny. The epithelial scales are thickened, desquamation and papules, Hunt, **135**, 2: 147.

Delicate desquamation of the epidermis, delicate papular eruption, **70**, 21.

General desquamation except of the head, De Haen, *op. cit.*

The skin becomes dry and dirty-looking, and a slight branniness may be noticed, most marked where the skin is covered with clothes. Eczema or urticaria may arise, or perhaps vesication or mere desquamation, with tenderness of the hands or soles of the feet. The hair, and even the nails, sometimes fall off. In arsenical poisoning a petechial papulo-vesicular and wheal-like rash often appears from the second to the fifth day, **5**, 224–5.

Itching of the eyelids, urticaria, eczema, pityriasis, and psoriasis, **4**, 105.

Diaphoresis, pruritus, eczema, pustules, desquamation, and pigment spots, **38**, 64–9.

Eruption of pustules on the face, shoulders, arms, and chest, **37**, 1: 404.

Alopecia areata, Wyss, **108**, '70, 395.

Eliminated in the sweat, Bergeron et Lemattre (Arch. gén. de méd., '64), **38**, 64.

In its elimination by the skin it unquestionably influences the functions of that organ; it is this action that is utilized in the treatment of cutaneous diseases, **38**, 69.

(In dogs.) Circumscribed erythematous eruptions near the joints, falling of the hair, leaving red, dry surfaces, vesicles on the abdomen, **38**, 68.

B. According to Dr. Braemer, in Cassel, there exists among those who have much to do with arsenic, an arsenical eruption which consists of small vesicles like those of scabies; the eruption prefers the scrotum and thigh, **1**, 1247.

Some workmen used arsenic by mistake for polishing purposes. In six of them minute papules appeared on face and scrotum, with redness and itching of the parts, and minute pustules on fingers, and around the nails, Ogston, **138**, '51, 184.

Nose, mouth, cheeks, and forehead were the seat of numerous small vesicles. On back of hands similar eruption, mingled with vesicopustules with slight indurated base. Skin tumefied (from finely powdered arsenic coming in contact with the face), Behier, **178**, May 27, '75.

Erysipelas, Belloc (Cours de méd. lég., an IX.), **39**, 21.

(From a lotion.) Severe pruritus and small pustules, Barrier (Jour. de méd., 1783), **39**, 39.

(From lotion to scalp.) On the eighth day the entire body covered with minute pustules, especially on hands and feet, Desgranges (Receuil périodique, 1799), **39**, 40.

(Lotion to scalp.) On second day, body greatly swollen, and covered with livid vesicles, followed by death, Portalez (Jour. de méd. de Corvisart, '03), **39**, 40.

(Lotion to scalp.) Erysipelas of head and face, shoulders, neck, and chest, Remer (Lehrb. d. chem. '12), **39**, 23.

Ulcers, which are deep, and coated on the surface by a buff-colored gelatinous-looking lymph, bordered by a dark red margin and surrounded by a purplish-red, thickened, and desquamating areola, **78**, 151.

C. Psoriasis, Girdlestone, **141**, '06, 297, and many others.
Eczema, T. Y., **141**, '07, 255, and many others.
Pemphigus, Ramskill (**187**, Jan. 4, '62), **17**, 741; **71**, 134; Hutchinson, **146**, 2/75, 23; **4**, 113, (H.G.P.)
Urticaria, **99**, 108; **210**.
Furuncles, **4**, 113; Schweich (B. & F. M. R. '48), **44**, 112; **210**.
Warts, **56**, 56; **202**.
Lupus, **70**, 163–5; **75**, 123; **95**, 218 *et seq.*
Epithelioma, rodent ulcer, **4**, 113.
Epithelioma, lupus, **207**.
Syphilitic nodes and pains, Colhoun, **105**, 3: 347; Eberle, **105**, 4: 460.
Syphilis (late lesions), **205**.
Obstinate syphilides, leprosy, and scaly eruptions, **1**, 1245.
Molluscum contagiosum, **57**, 258.
Lichen ruber, **97**, 1: 397; **1**, 1250.

D. Lupus, **75**, 123; **95**, 218 *et seq.* (Fowler's Sol.); Lang, **177**, No. 48, '79.
Cancerous growths, Justamond;* **54**, 1: 409; D'Ormea, **131**, 2: 418, and many others.
Leprosy (in ointment, gr. x. to ℥ i.); Colles, **137**, 1/64, 408.

Remarks.—Girdlestone was the first, I believe, to use arsenic internally for the relief and cure of cutaneous diseases. Its chief advocate, however, was Hunt, who lays down the following rules for its administration:

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* An account of the methods pursued in the treatment of cancerous and scirrhous disorders and other indurations. London, 1780.

1. It should never be commenced while signs of active cutaneous inflammation are present.

2. It should be well mixed with the food or drink, and never taken on an empty stomach.

3. It should be given in three or four doses in the twenty-four hours, and with exact regularity.

4. Five minims of the *liquor potassæ arsenitis* is generally a sufficient dose to commence with, *i. e.*, fifteen minims daily. As soon as the conjunctiva becomes affected this dose may be reduced, but it is desirable to reduce it gradually.

5. During the administration of the minimum dose, should conjunctivitis supervene, the dose should be further reduced, but it is desirable to reduce it gradually.

6. The minimum (*i. e.*, a dose which given, continuously, affects the conjunctiva in the slightest degree) should be persevered in with unremitting regularity for as many months after the final disappearance of the disease as it had previously existed years. This is often necessary to prevent a relapse.

7. Should the disease appear to advance, instead of receding, during any period of the minimum course, the course should not be interrupted on this account. Leeches or purgatives in sthenic, and quinine with a generous diet in the asthenic cases, will generally be sufficient. **137**, 1/46, 77.

At a recent meeting of the British Medical Association, Dr. Robert Farquharson read a paper on the subject of arsenic, in which he said: About thirty years ago, the British Medical Association issued a series of queries to its members, with reference to the use of arsenic in skin disease; and, considering the somewhat haphazard way in which the drug was then used, it was no doubt necessary to reassure the public mind, as was effectually done by the replies, that its use was at all events unattended with danger. We know now much more precisely in what cases to prescribe the remedy with good effect; and the question naturally arises: How do we explain the undoubted fact that, while arsenic frequently relieves and even cures certain forms of cutaneous disorders, at other times it appears to be inert or even to do harm? It has been supposed by some authorities that, following up the analogy of the vesicular and pustular eruptions, which form an occasional, though rare, part of its physiological action, it simply acts as a cutaneous irritant, by stimulating sluggish processes of repair; or, again, we may hold that it effects some alteration in the blood, through a general influence on cell-growth; or, thirdly, and most suggestively, we may seek for our clue in the regions of nervous pathology. We know that eczema and psoriasis and lichen, etc., often show their neurotic origin in heredity and symmetry, and itching and tingling; they not uncommonly appear in connection with mental shock and depression; and may alternate with, or accompany, such undoubtedly nervous disorders as chorea. Arsenic is generally held to be a nervine tonic, and, speaking generally, we find it to be an useful and reliable remedy in all the skin affections of the dartrous class (Clifford Allbutt). In pemphigus, it acts almost as a true specific (Hutchinson). It is most valuable in lichen ruber, and has been recommended as an antidote to bromide acne; although the question might arise, whether the arsenic in any way lessens the restraining influence of the bromide over the epileptic fits. Over impetigo, strumous and syphilitic diseases, it has no influence; and it would be interesting to note its effect on herpes zoster, which has been reported as occasionally following its administration. Concerning the mode of administration, the author preferred to begin with a full dose of ten minims to fifteen minims, and push boldly on, believing that, as with quinine and iodide of potassium, troublesome physiological symptoms are here more likely to follow small quantities than large. Some authorities strongly insist upon the necessity for producing some conjunctival and gastric irritation before we can obtain the full curative influence of the drug; but the author was opposed to this, believing these symptoms to be an unnecessary addition to the discomfort of the patient. When they do arise, they need not cause any alarm; but the sickness which sometimes follows each dose of the medicine is quite a fatal obstacle to its use. It is important to see that the natural elimination of the drug is not checked by any renal obstruction; and Dr. McCall Anderson warns us that patients, under the influence of arsenic, are specially susceptible to cold. May it not be, however, that the bronchial irritation occasionally observed may really be due to the curative influence of the remedy causing metastasis to the pulmonary mucous membrane? The liquor arsenicalis seems to be, on the whole, the best preparation; the liquor sodæ arsenitis being, in the author's experience, in no degree less irritating. Children will bear large doses with impunity; and although it is generally held that girls can take more than boys, the only case in early childhood in which it had been found seriously to disagree belonged to the female sex. Finally, it may be asked: Can we really *cure* chronic disease with arsenic? and the answer must be in the affirmative, if we get our case early, treat it systematically and carefully, continue the use of the drug for some time after the skin has become clear; and remember the importance of good food and air, and mental and bodily rest. **116**, 2/79, 292.

The choice of the preparation of arsenic to be used has usually been regarded as of little consequence, the one most frequently employed being the *Liquor Potassii Arsenitis*, or Fowler's solution. Eighty years ago Barton (**27**, p. II., 19) said: "I have for several years employed the oxyd of arsenic in substance in preference to Dr. Fowler's solution. I think it is a much more certain medicine than the solution." My own experience harmonizes with that of Dr. Barton. I usually employ the arsenious acid in trituration, either the second or third decimal trituration of the homœopathic pharmacopœia. Sometimes I combine it with black pepper, as in the ordinary Asiatic pill, sometimes with capsicum. It is a fact beyond question that the Styrian arsenic eaters consume, even at the beginning of their course, much larger quantities of arsenious acid without apparent inconvenience than the average patient can take as an equivalent in the form of Fowler's solution—which latter contains, beside the arsenite of potassium, alcohol, lavender, rosemary, cinnamon, cloves, nutmeg and red saunders. I must confess I am unfamiliar with either the physiological or medicinal effects of long-continued doses of these latter substances, and therefore, when I employ the arsenite of potassium, I am in the habit of giving it in simple solution in water; but, as before said, I prefer the arsenious acid itself, unless there appears to be some special indication for one of the alkaline salts. The pepper, either black or red, is a useful adjuvant in cases characterized by atonic dyspepsia, in addition to the lesions demanding the use of the arsenic.

Watery solutions of the alkaline salts of arsenic do not keep well, either simply dissolved in distilled water, or with the addition of compound spirits of lavender, as in Fowler's solution. Care should therefore be taken not to dispense an arsenical solution of any kind unless it is perfectly clear and free from sediment.

Arsenici Bromidum.

B. Exceedingly caustic, (H.G.P.)

C. Adenoma, Ostertag, **168**, Dec. '79, 567.
Acne, (H.G.P.)

Remarks.—The use of bromide of arsenic in acne is, I believe, original; at least, I have not met with any reference to it in literature. Conceiving, from purely theoretical considerations, that it might be useful in certain cases, I first tried it in the spring of 1878 in a case of pustular acne vulgaris of moderate severity, and gave it in doses of one milligram (gr. $\frac{1}{65}$) three times a day. Within a week the patient, a young lady, returned, complaining that her face was much worse. On examination I found on each side of the face a crop of miliary pustules in addition to the acne. The arsenic was discontinued, and a placebo prescribed. This was followed by improvement for a week, when the arsenic was resumed in much smaller doses, and in three or four weeks the case was substantially well. In a second case I had a similar experience, and in a third case I prescribed an alcoholic solution containing one grain to the ounce, and directed that two drops should be taken night and morning. This patient I did not again see for nearly six months, when she informed me that the medicine had in a few weeks accomplished all that she desired. Since then I have used bromide of arsenic with much satisfaction in pustular acne, but have not tried it in other varieties of this affection, nor in other cutaneous diseases.

While experimenting with the drug, I learned, accidentally, that the pure bromide is a pretty active caustic.

Arsenici Iodidum, U.S.

C. Psoriasis, **29**, 316; Thomson, **44**, 116.
Lupus, **44**, 116; **83**, 310.
Impetigo, Thomson, **44**, 116.

Remarks.—This preparation is supposed to be specially applicable, and to be preferred, in cases of eczema, psoriasis, etc., occurring in scrofulous subjects. Just how much truth there is in this, I cannot say, but think I have obtained benefit from its use in a few cases of acne that had not improved under arsenious acid alone. It may be given in pill, trituration, or solution.

Arsenicum Hydrogenisatum.

A. Skin of the face became dark brown, hair on the extremities became white. Schindler (Graefe u. Walther's Archiv, '38), **40**, 256.
Skin jaundiced. Trost (*Viertljschft. f. gericht. Med.*, '73), **170**, '73, 159: 31.

ARTEMISIA ABROTANUM, *L.* F.; U.S.D.

A. Diaphoretic, **23**, 4 : 345; **34**, 1: 116.

D. A decoction promotes the growth of the hair and prevents its falling out, **23**, 4: 345.

ARUM (*Arum maculatum, L.*) F.; U.S.D.

B. The fresh leaves and root are rubefacient and vesicant, **26**, 99; **36**, 1: 338.

D. Atonic and scrofulous ulcers, **26**, 100.
Condylomata, **35**, 134.

ASARUM (*Asarum Canadense, L.*), U.S.

A. Diaphoretic, **10**, 1: 592.

ASCLEPIAS DECUMBENS, *L.*

A. General and plentiful perspiration, **27**, 2: 41.

ASCLEPIAS TUBEROSA, *L.*; U.S.

A. Diaphoretic, **21**, 2: 176; **33**, 1: 246; **36**, 1: 341; **41**, 2: 63; **50**, 201.

B. The powdered root is escharotic, **50**, 228.

ASCLEPIAS VINCETOXICUM, *L.* F.; U.S.D.

A. Diaphoretic, **34**, 1: 544.

ASSAFŒTIDA (*Narthex Assafœtida, Falc.*), U.S.

A. Diaphoresis, **54**, 1: 417.
Excreted by the skin, **1**, 652; **6**, 555.

C. Chronic scaly eruptions, chronic eczema, etc., especially when the skin is dry and harsh, are much improved by the persistent use of assafœtida, **4**, 299.

REMARKS.—The officinal preparations are: *Mistura Assafœtidæ; Tinctura Assafœtidæ; Pilulæ Assafœtidæ; Suppositoria Assafœtidæ; Emplastrum Assafœtidæ.*

AURUM—(Auri Chloridum, F.; U.S.D.)

A. Diaphoresis, **3**, 1: 278; **36**, 1: 383.

C. Leprosy, Chrestien, **117**, 7: 41; **1**, 1127.
Lupus (*ibid.*).

Syphilis, Chrestien and Niel;* Legrand;† Cheesman;‡ **1**, 1127; **4**, 187, (H.G.P.)

"The happy results of gold in the treatment of venereal diseases is an uncontestible fact," **3**, 1: 282.

"The efficacy of the medicine has been tried year after year in the New York Hospital. My practice with it there has been witnessed by all the attendants of the wards. It possesses admirable virtues against syphilis. Without presuming to affirm that it is capable of eradicating the distemper in every instance, my opinion, on the whole, is that the muriate of gold will effect all that is achieved by the muriate of quicksilver, with incomparably less inconvenience to the patient. He gets well under the operation of the former without the hazard of a sore mouth or a salivation, and with very little wear and tear of constitution. I consider the introduction of this preparation into common use as one of the greatest improvements in modern medicine, and I wish it was already as universal as the malady it is intended to remove." Mitchill.§

D. Lupus, Danzell (Aertztl. int. Blatt), **117**, 66: 90.

Remarks.—The preparations of gold most frequently employed are the chloride and the double chloride of gold and sodium. My personal experience is limited to the use of gold in the later stages of syphilis, in which I have found it unquestionably useful. Its best effects are obtained when given in doses very much smaller than those usually recommended. I rarely prescribe more than a milligram (gr. $\frac{1}{65}$) at a dose, usually less, and rarely continue its use for more than one or two weeks at a time.

Balsamum Gurjunicum (*Dipterocarpus—species variæ*).

C. and **D.** Leprosy, Dougal (Report on the Treatment of Leprosy with Gurjun Oil, Calcutta, 1874), **146**, 1/74, 683; Alken, **170**, No. ix. '77; **46**, 66.

D. Eczema, cancer, Wilson, **137**, 1/74, 694.
Lupus, Wilson, *loc. cit.;* **79**, 68.
Infiltrated eczema and psoriasis, **209**.

Remarks.—Gurjun, like other balsams, is stimulant in its action, and, like other stimulating applications, is useful in suitable cases of eczema and lupus. Its chief dermatological employment, however, has been in connection with the treatment of leprosy. The details of its use will be considered in connection with that disease.

Balsamum Peruvianum (*Myroxylon Pereiræ, Klot.*), U.S.

A. Diaphoretic, **9**, 228; **2**, 351.

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* Recherches et observations sur les effets des préparations d'or du Docteur Chrestien, par J. G. Niel. Paris, 1821.

† De l'or, de son emploi dans le traitement de la syphilis récente et invétéré, etc. Paris, 1842.

‡ An inaugural dissertation on the medical properties of gold. New York, 1812.

§ Edinburgh New Dispensatory. Am. Ed., by Dyckman, New York, 1818, p. 201.

D. Indolent ulcers.
Scabies, **6**, 564.
Pruritus, Auerbach, **121**, No. 34, '79, 439.

REMARKS.—One of the most useful and generally used stimulant applications in the treatment of ulcers. It is commonly employed in ointment of various strengths.

BAPTISIA (*Baptisia tinctoria*, *R. Br.*), P.; U.S.D.

A. Diaphoretic, **33**, 2: 57.

D. Very useful as an application to foul ulcers, **33**, 2: 61.

BARII ACETAS, P.

A. Acne on chest, formication of head and face, sensation as if the head, face, and arms were covered with parchment. Lagarde, **174**, '72, 539.

BARII CHLORIDUM, U.S.

A. Eruptions on the skin, **1**, 1062.
Papular eruption, **117**, 9: 94.

C. Eczema capitis of children, **54**, 2: 625.
Lupus, **57**, 280.
Scrofulous affections, **16**, 4; 573.
Leprosy, (H.G.P.)
Acts efficiently in local affections dependent on vicious secretions, such as cutaneous eruptions, ulcers, etc., Hufeland.*

REMARKS.—The chloride of barium has been credited with power of controlling the proliferation of connective tissue, and of removing the products of such proliferation. This idea induced the author to try its effects in two cases of leprosy. In one of them marked benefit followed its use, in the other apparent temporary amelioration occurred.

The only officinal preparation is the *Liquor Barii Chloridi.*

BARII SULPHIDUM.

D. Depilatory, McCall Anderson, **137**, 2/71, 708.

BELLADONNA (*Atropa Belladonna*, *L.*), U.S.

A. Sensation of burning and biting in the skin, and later dryness. In poisonous doses the face, and even the whole body, red, dry, and hot, **6**, 57.
If administered for several days in succession, it sometimes gives rise to a reddish efflorescence, **10**, 1: 960.
Scarlatina-like eruption, **2**, 50; **7**, 510.
In persons of light complexion, more especially in women, a full dose

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* Traité de la maladie scrofuleuse, etc., traduit par Bousquet. Paris, 1821, p. 195.

of atropia is frequently followed by a diffuse redness of the skin, not unlike the rash of scarlatina, but wanting in the punctate character of this specific eruption, **4**, 282.

(Injection of atropine.) Skin at first pale and dry like parchment, and later, erythema, **17**, 1005.

C. Arrests too profuse sweating, and checks the secretion of foul-smelling sweat from the feet, **5**, 456–8.
(Atropia) Hyperidrosis. Royet.*
Urticaria, Smith, **158**, Dec. '79, 331.
Acne, **204**.
Erythema, **4**, 287; **13**, 69.
Erysipelas, **2**, 59; **4**, 285; **13**, 13; **17**, 1009, (H.G.P.)
Scarlet fever, **13**, 69.
Diffuse inflammatory affections of the skin, **2**, 59.
Prophylactic against scarlet fever. Hahnemann; † Hufeland; ‡ **13**, 2: 70; **26**, 165.
On a review of the whole subject, we feel bound to express the conviction that the virtues of belladonna, as protection against scarlatina, are so far proven that it becomes the duty of practitioners to invoke their aid whenever the disease breaks out in a locality where there are persons liable to the contagion, **10**, 1; 924.
Pruritus ani, **210**.

D. Zoster, Dauvergne, **117**, '69, 76; 170.
Erysipelas (H.G.P.); (*atropiæ oleas*) Shoemaker, **196**, '79.
Sensitive scars, **208**.

REMARKS.—The officinal preparations of belladonna are: *Tinctura Belladonnæ; Extractum Belladonnæ; Extractum Belladonnæ Alcoholicum; Extractum Belladonnæ Radicis Fluidum; Unguentum Belladonnæ; Emplastrum Belladonnæ; Suppositoria Belladonnæ; Atropia; Atropiæ Sulphas.*

BENZOINUM (*Styrax Benzoin, Dryan*), U.S.

A. Diaphoretic.

D. Rosacea, **20**, 265.
Fissured nipples.

REMARKS.—The officinal preparations are: *Tinctura Benzoini; Tinctura Benzoini Composita;* and *Unguentum Benzoini.* The advantages to be derived from the addition of benzoin to ointments and cerates was first prominently urged by Wilson. It tends to preserve them from rancidity, and in addition acts as a mild stimulant. When a little more stimulation than that afforded by the Ungt. Benzoini is desired, I sometimes employ the compound tincture of benzoin, which contains aloes.

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* De l'emploi du sulphate d'atropine contre les sueurs pathologiques. Paris, 1877.

† Heilung und Verhütung des Scharlachfiebers. Nürnberg, 1801.

‡ Die Schutzkraft der Belladonna gegen das Scharlachfieber zu fernerer Prüfung aufgestellt. Berlin, 1826.

BETULA ALBA, *L.*, P.; U.S.D.

C. Cutaneous eruptions, **23**, 5; 25.

D. Scabies, **23**, 5; 24.

REMARKS.—The white birch yields an empyreumatic oil, commonly termed *Oleum Rusci.* Its uses are similar to those of Pix Liquida and Oleum Cadinum.

BIGNONIA CAROBA, *Vell.*

C. Syphilis and diseases of the skin. Villa-Franca, **117**, '79, 97: 31.

BISMUTHI SUBNITRAS, U.S.

D. Erythema, erysipelas, herpes, eczema, and superficial erosions, **16**, 5: 113.
Rosacea, eczema with much serous exudation, intertrigo, **4**, 103.
Squamous eruptions, **17**, 973.
Pruritus (in ointment), **203**.

REMARKS.—It is commonly employed as a dusting powder, alone or diluted with starch, or in ointment. It probably acts merely as a protective.

BRASSICA NAPUS, *L.;* N.D.

A. Blotches of deep red, resembling burns, on the backs of hands and dorsa of feet. Similar blotches on nose and forehead, sometimes followed by troublesome ulceration. Popham, **137**, 1/49, 635.

REMARKS.—These symptoms were observed during an Irish famine, when the peasants of some districts, for lack of other food, consumed large quantities of the above.

BROMINIUM, U.S.

A. Acne, **210**.

B. Tinges the skin yellow and produces hyperemia and irritation, **24**, 2: 1002.
Applied in a liquid form and undiluted, acts as an energetic and very painful caustic, **4**, 483.

D. Phagedena and hospital gangrene.

BRYONIA (*Bryonia alba, L.*), F.; U.S.D.

B. The freshly chopped root applied to the skin produces redness, and, if left on for some time, a pustular eruption, **1**, 140.
The fresh root inflames the skin, **23**, 5: 171.

C. In chronic skin diseases, **1**, 140.

BUXUS SEMPERVIRENS, *L.*, F.; U.S.D.

A. Diaphoretic, **23**, 5: 30.

D. Promotes the growth of the hair (*ibid.*).

CACTUS GRANDIFLORUS (*Cereus grandiflora*, D.C.), P.; U.S.D.

B. Pruritus, pustules, excoriations, **36**, 2: 1.

CADMII IODIDUM, B.

D. Scrofulous glands and chronic skin diseases (Garrod), **117**, Feb. '58, 165.

CALADIUM SEGUINUM, *Vent.*, P.

B. A single drop of the expressed juice of the leaves produces an intense itching and burning, and afterwards inflammation, **152**, 111.

C. Pruritus pudendi. Scanzoni *; (H.G.P.)

D. Pruritus pudendi (juice of the root 1 part, water 200 parts), **152**, 111.

REMARKS.—The only preparation of Caladium at present accessible is the tincture of the fresh root. This I have employed to advantage in several cases of pruritus pudendi, and in pruritus ani. This use of the drug was first noticed, I believe, by Scholz of Breslau (referred to by Scanzoni).

CALCII CARBONAS, U.S.

D. As a dusting powder in moist eczema, excoriations, and intertrigo, **24**, 1: 186; **43**, 231.

REMARKS.—The officinal preparations are: *Calcii Carbonas Præcipitata ; Creta Præparata ; Trochisci Cretæ ; Mistura Cretæ.*

CALCII CHLORIDUM, U.S.

C. Eczema, Cazenave, **107**, 3: 28; **55**, 43.
Lupus, Cazenave, **44**, 143; **86**, 2: 207.
In solution as a fomentation it hastens the maturation of furuncles, **24**, 1: 180.

REMARKS.—The only officinal preparation is the *Liquor Calcii Chloridi.* In prescribing this drug the name should be written in full, otherwise a solution of chlorinated lime (*Calx Chlorinata*) may be furnished, as has already occurred.

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* Lehrbuch der Krankheiten der weiblichen Sexualorgane. Wien, 1857, p. 480.

Calcii Phosphas, U.S.

C. In ulcerations and chronic suppurations with thin pus and torpid base, it increases the plasticity of the cells and accelerates the formation of vigorous granulations capable of inducing cicatrization, **24,** 1: 171.

Remarks.—The officinal preparation is the *Calcii Phosphas Præcipitata.*

Calcii Sulphidum, F.; U.S.D.

A. Vesicles, pustules, furuncles, Hahnemann, Reine Arzneimittellehre, 4: 322–5–8.
Furuncles, Alexander (oral. com.).

C. Acne, Cane, **137,** 2/78, 215; **206; 209.**
Eczema, Hutchins (oral com.); (H.G.P.)
Furuncles, Smith, **109,** April 10, '77; Huse, **149,** '79, 154; Hardaway, **168,** July, '79, 18; Sexton, **192,** Jan. '79, 41; **203; 209;** (H.G.P.)
A tenth of a grain of sulphide of calcium, given hourly or every two hours, will generally prevent the formation of fresh boils, while it lessens the inflammation and reduces the area of existing boils, and quickly liquefies the core, so that it separates much more speedily, **5,** 63.
Ecthyma, **209.**

D. Favus, Gamberini, **131,** 3: 134.
Psoriasis, **72,** 309; **97,** 1: 379 ; **209.**
Trichophytosis, Cannon, **41,** 242.

Remarks.—One of the earlier uses of this drug was as an antidote to the effects of mercury. As such it is mentioned by Paping * in the last century. For some years it maintained its reputation in this connection, but gradually, and I think unwisely, fell into disuse. Later it was recommended by Hahnemann under its then pharmaceutical title, *Hepar Sulphuris Calcarea,* as a remedy for furuncles, abscesses, and excessive suppuration. These applications of the drug were confined, I believe, almost exclusively to homœopaths, until a few years ago, when Ringer brought it forward as a remedy for the same conditions. He was followed by Cane, who advised its use in acne. Since then pills of calcium sulphide are found in every pharmacy. Sulphide of calcium is a very unstable salt; and, on exposure to the atmosphere, becomes converted in a short time into an insoluble and comparatively inert sulphate of calcium. This may explain the unsuccessful use of it by many who prescribed it on Ringer's recommendation, as, until recently, the sulphide of calcium of the drug stores was rarely of good. quality. It also explains the very large doses (three to five grains) that have been recommended by some. As a rule, from one-tenth to one-fifth of a grain has, in my experience, been ample, and a larger dose gave rise to discomfort. My own observations as to its therapeutic efficacy harmonize with those recorded by others. In 1878 I experimented with it largely in unopened buboes, in patients in the venereal wards of the Charity Hospital. In these cases it certainly seemed to exert a decided influence over the suppurative process.

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* De Sulpureto Calcis, optimo contra Salivationem mercurialem remedio. Groningæ, 1796.

It may be noted that the *Hepar sulph.* of the homœopaths is not pure sulphide of calcium, but contains other substances derived from the oyster-shell used in its preparation. Whether the calcium sulphide of ordinary pharmacy is the pure salt I have not been able to learn.

CALENDULA (*Calendula officinalis, L.*), P.; U.S.D.

A. Diaphoretic, **34**, 1: 175.

D. Callous ulcers, **51**, 7: 178.
Incised and lacerated wounds, Livezey, **145**, Aug. 1, '68, 85; (H. G.P.)
Chapped hands, **207**.

REMARKS.—Although a European plant, it grows readily in our gardens, and a tincture made from the fresh herb, and diluted before use, forms one of the best local applications for fresh wounds with which I am acquainted. It has been my custom for many years to employ it as a dressing after operations.

CALOTROPIS GIGANTEA, *R. Br.*; U.S.D.

A. Diaphoretic, **19**, 2; 78.

C. It has been given with great advantage in syphilis, lepra, and other cutaneous eruptions, and has been found very efficacious in that species of cancer, so common among the natives of India, called lupus, Playfair, **173**, '25, 1: 85.
Leprosy, Voss, **173**, '26, 2: 409; Macnamara (Ind. Med. Gaz., '66), **135**, 1: 410; **46**, 93.
Syphilis, obstinate ulcerations and skin diseases arising from the abuse of mercury, **46**, 93.
Psoriasis. Duncan, **127**, July, '29, 65.
I am prepared to agree with Mr. Playfair most fully as to the virtues of asclepias, called in Hindostan, mudàr. I can also bear witness to its powerful effects as a sudorific in almost all cutaneous eruptions arising from obstructed perspiration and an apathy of the extreme vessels. Its action is quick and decided, causing a sense of heat in the stomach, which rapidly pervades every part of the system, and produces a titillating feel upon the skin from the renewed circulation through the minute vessels. It does not appear to be useful, or indeed admissible, where the affection is inflammatory, or the eruption pustular. The great and rapid determination it causes to the skin has an obvious tendency to increase those diseases. I have tried it frequently in lues venerea, but cannot venture to recommend it as a substitute for mercury; it will enable you to heal a chancre, but does not eradicate the poison. In the secondary symptoms, however, it is an admirable ally, superseding, by its certain efficacy, the exhibition of mezereon, sarsaparilla, and other vegetables of doubtful utility. Where

mercury has been used, but cannot be pushed safely any further, mudâr rapidly recruits the constitution, heals the ulcers, removes the blotches from the skin, and perfects the cure. Robinson, **147**, 10: 32.

The clinical experiments of Mr. Playfair, Dr. Duncan, and Dr. Royle, leave no doubt of the bark of the root being really efficacious in leprosy and in numerous diseases of the skin, O'Shaughnessy.* The bark of the root, and the dried milky juice are the most efficacious parts, **19**, 2: 78.

Remarks.—The testimony in favor of Calotropis, called also *Asclepias gigantea* is certainly quite strong, and it is surprising that if it possesses even a portion of the virtues ascribed to it, that it is not better known and more generally used. I have used it to a slight extent, but not sufficiently to speak with confidence concerning it. The usual dose of the bark of the root is from one to three grains, two or three times a day. In overdoses it nauseates.

Calx—(Liquor Calcis, U.S.)

D. Diminishes the secretion from profusely suppurating sores, eczema, impetigo, **24**, 1: 178; **5**, 134; **6**, 200.
Suppurating ulcers, **54**, 1: 466.
Pemphigus, **24**, 1: 178.
Pruritus pudendi, **46**, 87.
Eczema, **203**.
As a depilatory (*calx usta*), **208**.

Remarks.—Lime-water mixed with linseed, or other vegetable oil, constitutes the universally employed Carron oil, represented in the pharmacopœia by the *Linamentum Calcis*. Calomel and lime-water in the proportion of 1 to 60, and corrosive sublimate and lime-water in the proportion of 1—300, constitute respectively the *Lotio Nigra* and *Lotio Flava* of pharmacy. The latter is the *Aqua Phagœdenica* of the older writers.

Calx Antimonii Sulphurata.

C. Chronic eruptions on the fingers, Gutgesell, **134**, '01, 11: St. 2, 181.

D. Eruptions and ulcers, Hufeland, **134**, 1797, 4: St. 1, 66.

Remarks.—Dr. Chas. Rice furnishes me the following note: Calcaria sulphurato-stibiata, sulphuretum calcis stibiatum, calx antimonii cum sulphure, hepàr calcis antimoniatum, calx antimonii Hoffmanni, and about forty other synonyms denote a compound containing sulphide of calcium and sulphide of antimony. It was last officinal in the Baden Pharmac. of 1841.

Crude sulphuret of antimony......................	ʒ iii.
Sulphur..................................	℥ ss.
Lime......................................	℥ ii.

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* Bengal Dispensatory. Calcutta, 1842, p. 454.

Powder and mix. Heat in a covered and well luted crucible for one hour—on opening after cooling, the upper part of the powder is to be rejected—and that which is underneath, kept in well-stoppered bottles.

CALX CHLORINATA, U.S.

D. Scabies, which it seldom fails to cure speedily and effectually, **29**, 278.
Eczema capitis, Kopp, **32**, 2: 622.
Pemphigus, **32**, 2: 623.

REMARKS.—The officinal preparation contains 5 per cent. of chloride of lime, and is called *Liquor Calcis Chlorinatæ.* I have never employed it for the purposes above mentioned. As a deodorizer of fetid ulcers its use is well known.

CAMPHORA (*Cinnamomum Camphora, Nees*), U.S.

A. Diophoretic, **1**, 358; **6**, 594; **32**, 1: 713.
Is eliminated in part by the skin, **7**, 460; **13**, 74.

B. A concentrated solution rubbed in, soon causes heat and bright redness, **2**, 505.

C. Pruritus pudendi, **44**, 155.

D. Ichorous pustules and torpid ulcers, **24**, 689.
Chronic vesicular and pustular eruptions, **32**, 1: 718.
Pruritus.
Herpes labialis, **204**.

REMARKS.—The officinal preparations are *Oleum Camphoræ; Aqua Camphoræ; Spiritus Camphoræ;* and *Linimentum Camphoræ.* In cutaneous therapeutics camphor finds its most frequent application as an external remedy for the relief of pruritus. Combined with chloral it has been found specially useful by Bulkley and Anderson.

CANNABIS INDICA (*Cannabis sativa, L.*), U.S.

A. Crawling and pricking sensation, **6**, 35.
Vesicular eruption, Hyde, **143**, May 11, '78, 364.

REMARKS.—A pill of cannabis indica at bedtime has at my hands sometimes afforded relief to the intolerable itching of eczema. The officinal preparations are *Extractum Cannabis Indicæ* and *Tinctura Cannabis Indicæ.*

CANTHARIS (*Lytta Vesicatoria*), U.S.

A. Exfoliation of skin of penis and scrotum, with strangury and hematuria (from application to the knee. No direct transfer possible), **206**.

B. Pain, redness, vesication. The $\frac{1}{100}$ of a grain is sufficient to produce a blister, **1**, 391.

C. Eczema and psoriasis, Tilesius (Theorie d. flechtenart. Aussch. Leipz. 1802), **32**, 2: 411; **58**, 109; **13**, 78.
Psoriasis, **54**, 1: 501; **58**, 332; **65**, 382; **67**, p. I., 118; 75, 205; **81**, 22; **86**, 2: 123.
Psoriasis sometimes yields with surprising rapidity, **10**, 1: 313.
The tincture of cantharides, commencing with a dose of three or four drops, gradually increased up to twenty, succeeds admirably in the treatment of psoriasis. Prudently administered and carefully watched, it is without danger. The remedy succeeds best and most promptly with women, **3**, 1: 395.
Leprosy, **58**, 377.

D. Psoriasis, lupus, **9**, 544.
Psoriasis and eczema, **7**, 923.
Alopecia areata, **3**, 1: 395; **13**, 78. (H.G.P.)
Infiltrations, **209**.

REMARKS.—The officinal preparations are: *Tinctura Cantharidis; Ceratum cantharidis; Ceratum Extracti Cantharidis; Charta Cantharidis; Unguentum Cantharidis; Collodium cum Cantharide;* and *Emplastrum Picis cum Cantharide.*

Cantharides is more frequently used internally in France and other parts of Continental Europe than in England or the United States. This is due in part, I fancy, to prejudice, or rather fear of giving rise to genito-urinary or erotic complications. This fear is in great measure groundless when the drug is administered with care, and the patient warned to be on his guard against vesical irritation, and to suspend its use on the occurrence of the slightest unpleasant symptoms. It is undoubtedly efficacious in the treatment of psoriasis, and answers well during the suspension of an arsenical course. Nothing can be definitely stated concerning the dose, as the tincture of the shops varies greatly in activity, much being made from inferior qualities of the insect, and not a little, I believe, from the Chinese fly, which is not as active as the genuine article. The common potato-bug (*Doryphora decemlineata*) has been found to contain *cantharidin*, and a strong tincture prepared by maceration of the crushed insect might prove an efficient substitute for the foreign article.

Externally, cantharides is of the utmost value in alopecia areata, and, greatly diluted, is an ingredient of many of the hair-washes and "renewers" in the market.

CAPSICUM (*Capsicum annuum, L.*), U.S.

A. Pruritus ani, **98**, 65.

B. Pruritus, **184**, 9: 124.
Rubefacient, **1**, 416.
Rubefacient and vesicant, **2**, 86.

D. Alopecia areata, **203**.

REMARKS.—The officinal preparations of capsicum are, *Infusum Capsici; Oleo-resina Capsici;* and *Tinctura Capsici.* The drug has little employment in dermatology, except as an ingredient of stimulating applications for the scalp.

CARBONEI BI-SULPHIDUM, G., U.S.D.

A. Diaphoretic, Wutzer, **36**, 2: 41.

B. Smarting and pain, **146**, 2/68, 77.
Vesicular eruption, **206**.

CARDUUS BENEDICTUS (*Centaurea benedicta*, *L.*), P.; U.S.D.

A. Diaphoretic, Seeling, **134**, '01, 11: St. 3, 183; **23**, 4: 431.

CAROTA (*Daucus Carota*, *L.*), U.S.

D. Eczema rubrum (Dubois), **26**, 254.
The fresh root very healing in cancerous and old ulcers, **23**, 1: 387.
Calms the pains of cancer and old ulcers, **49**, 2: 239.
Ulcers, **34**, 1: 24; **48**, 2: 161; and many others.
Sloughing ulcers, Walker.*

REMARKS.—If carrots possess half the efficacy attributed to them by the older writers, they certainly deserve more extensive employment. The fresh root should be grated or scraped and applied as a poultice.

CASSIA ALATA, *L.*

D. Its leaves have attained a well-earned repute as a remedy in skin diseases, especially in ringworm, **46**, 36.
Trichophytosis, Foulis, **116**, 1/77, 71.
The juice of the leaves is a very good application to the chronic form of the common ringworm. Arjun.†

CHELIDONIUM (*Chelidonium majus*, *L.*), F.; U.S.D.

A. Diaphoretic, **23**, 3: 203; **31**, 86; **43**, 364.
Its effects on the skin are unmistakable, 1, 388.

B. The juice is acrid, irritant, and even escharotic, **19**, 1: 131; **23**, 3: 203.

C. Herpes, **20**, 160; **31**, 86.
Chronic eruptions, **1**, 388; **43**, 364; **54**, 1: 537.

D. Ulcers, **1**, 388; **23**, 3: 203; **28**, 11.
I have applied the fresh root to ulcerated scrofulous tumors. The effect is marked and similar to that produced by Arum. The juice of the leaves and root, pure or mixed with water, applied on lint to ill-conditioned ulcers, modifies them beneficially, and promotes cicatrization, **26**, 283.

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* Observations on the Remarkable Efficacy of Carrots in the Cure of Ulcers and Sores. Oxford, 1806.

† Catalogue of the Bombay Drugs, including a List of the Medicinal Plants of Bombay Used in the Fresh State. Bombay, 1879, p. 190.

Chronic eruptions, **43**, 364; **54**, 1: 537; 1: 388.
Warts, **19**, 1: 131.
Mentagra, **53**, 130.

CHIMAPHILA (*Chimaphila umbellata, Nutt.*), U.S.

B. The bruised leaves, when externally applied, sometimes induce redness, vesication and desquamation of the skin, **27**, 2: 31.

C. "Peter Meary, 45 years of age, was about 13 years since afflicted with wolf cancer in his back. After four years' growth it was extracted, but again appeared in about three years after the performance of the operation. It was again extracted, but in three years more visited him with aggravated symptoms. Despairing of the effect of the knife, he used a tea of the deduction of Pipsissaway, by the recommendation of a friend, and in about a month after commencing its regular use the cure was effected." **144**, '18, 298.

REMARKS.—The officinal preparations are: *Decoctum Chimaphilæ* and *Extractum Chimaphilæ Fluidum.*

CHLORAL, U.S.

A. Erythema, Schule (Allg. Zeitsch. f. Psych., 28:), **162**, June, '73, 362; Murphy, **137**, 2/73, 150 and 191; Martinet.*
Scarlatinoid eruption (*ib.*); Husband, **162**, June, '73, 363.
Papular eruption, Litten (Char. Ann. '77, 194), **182**, '79, No. 23, 413.
Inflammatory redness, petechial spots, purplish red spots, and desquamation, Browne, **162**, June, '73, 363–6.
Erythema, papules, pustules, shedding of hair and nails, Kirn (Allg. Zeitsch. f. Psych.), **162**, June, '73, 362–8.
Desquamation of the cuticle and superficial ulceration, especially about the borders of the nails, N. R. Smith, **104**, 2: 374.
Hyperæsthesia followed by anæsthesia, **24**, 2: 344.

B. Erythema and vesicles surrounded by capillary hyperemia, **24** (*ib.*).
Erythema, Denslow (oral. com.).

D. Eczema, Craig, **126**, Feb. '76, 714.
Pruritus, **203**; **208**.

REMARKS.—Its chief use is as an antipruritic. If applied to a raw surface, it causes sharp pain, and should be largely diluted. It may be used alone or combined with camphor.

CHROMII CHLORIDUM.

D. Malignant growths.
Chancroids (H.G.P.)

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* Des éruptions cutanées provoquées par l'ingestion de l'hydrate de chloral. Paris, 1879.

Remarks.—A solution of this salt has been recently introduced as a caustic agent for the destruction of malignant growths. It is prepared, according to Messrs. Bullock & Crenshaw, who manufacture it, by dissolving hydrated sesquioxide of chromium in hydrochloric acid, and evaporating the solution to a syrupy consistence. Its action is exceedingly superficial and not very painful. The crust which forms after its application to a diseased surface remains attached for a long time, in one instance five weeks, under my own observation. Unless superficial action only is desired, it will be necessary to detach this crust and reapply the solution from time to time. My own experience with it is yet too limited to enable me to speak with confidence concerning its sphere of usefulness. When deeper action was required, I have mixed it with chloride of zinc.

Chrysanthemum leucanthemum, *L.*

D. Tinea, **23**, 4: 397.
Ulcers, **31**, 125.

Cichorium Intybus, *L.*, F.; U.S.D.

C. Diseases of the skin, **51**, 3: 2.
Acne, **62**, 219.
Eczema, **65**, 195.

D. Smooths the roughened skin, **35**, 110.

Cimicifuga (*Cimicifuga racemosa, Ell.*), U.S.

A. Heat of the skin with elevation of 1°—2° of temperature, **24**, 2; 390.
Diaphoretic, **28**, 6.

D. Scabies, **27**, 1: 9.

Remarks.—The only officinal preparation is the *Extractum Cimicifugæ Fluidum.*

Cinchona (*Cinchona*, various species), U.S.

A. Scarlet eruption, **209**.
Pruritus, vesicles, and urticarial eruption.*

C. Hyperidrosis, **62**, 105.
Chronic eruptions, **54**, 1: 571.

Quiniæ Sulphas.

A. Dermalgia and desquamation, Field, **143**, Nov. 30, '78, 427.
Erythematous disks (Grellety), **89**, 24, 206.
Erythematous eruption with tingling and itching, Slocum, **143**, '77, 334.

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* Hahnemann—Reine Arzneimittellehre, 2te Aufl. Dresden, 1825, 3: 143.

Scarlatinoid redness, papules, Köbner, **114**, '77, 305.

Scarlet eruption, **209**.

Bright scarlatinoid eruption all over the body and intolerable itching, Skinner, **116**, 1/70, 103.

Rash as vivid as scarlatina, with intolerable and incessant itching, followed by universal exfoliation of the cuticle; Hemming, **116**, 2/69, 533.

Scarlet efflorescence, edema, wheals, pruritus, King, **161**, Mch. 1, '79, 251.

Flat, slightly raised patches of a rose-pink color, and accompanied by much tingling and itching, Farquharson, **137**, Nov. 16, '78.

Burning and eruption like *erythema exsudativum multiforme*, Heusinger, **114**, '77, 361.

Edematous erythema, followed by desquamation, Garraway, **116**, 2/69, 388.

Urticarial eruption, Thin, **146**, 1/79, 421; **206**; 209.

Erysipelatous redness and wheals, Newman, **116**, Apr. 8, '71.

Bullous eruption (Panas), **89**, 66.

Rubeoloid eruption, Farquharson, **172**, 12: 25.

The following have been observed in workers in quinine factories:

Confluent vesicles, sometimes ulcerating, sometimes drying into crusts. The forearms, internal aspect of the thighs and genitals, are the parts affected by preference. Sometimes the vesicles are isolated, at other times they are confluent and unite to form bullæ. Extensive surfaces may be deprived of epidermis by furfuraceous or foliaceous desquamation, **185**, May and July, '76.

Pruritus, erythematous, roseolous, pustular, and purpuric eruptions and desquamation (many authors cited).*

Dr. P. A. Morrow has made a careful study (**155**, March, '80) of the recorded cases of quinine eruption, as well as those which he has individually met with, and writes as follows:

"The prevailing type of the quinine exanthem is erythematous. In most cases it appears as an efflorescence of a bright, vivid hue, disappearing on pressure, and closely resembling the rash of scarlatina. It first shows itself upon the face and neck, but soon becomes diffused over the whole surface of the body; in exceptional cases it may not become generalized; or it may appear in the form of distinct red spots, which usually become confluent and patchy, and the coloration may exhibit a darker hue, resembling that of measles. Again, it may present itself with the typical wheals of urticaria. In this class of cases there is more or less œdema, and the subjective symptoms of burning, tingling, itching, etc., are more distressing. An examination of the sixty cases above referred to shows that many varieties of form are represented. In thirty-eight cases the general character of the eruption was erythematous. It was further described as 'scarlatinal,' 'scarlatinoid,' 'bright red,' 'measly,' 'rubeolous,' 'papular,' 'erysipelatous.' In two cases it was 'vesicular.' In twelve cases it was described as 'urticarial' with 'puffiness of face,' etc. Of the severer forms, I have collected five cases of purpura. They are presented with so much detail and by such careful observers that no doubt can remain of the possibility of the occurrence of these hæmorrhagic accidents. Vepan reports four cases in which an eruption of petechial spots occurred over the whole body from the use of comparatively small doses of quinine. In one case the purpura was accompanied with bleeding from the gums and sanguinolent stools.

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* Jeudi de Grissac—Des éruptions quiniques. Paris, 1876.

"Gauchet reports a case in which the intolerance of quinine was so absolute that small doses, only ten centigr., continued for four days, produced purpura, with buccal hæmorrhage, principally from the gums. The petechial spots were abundant and generally distributed. In this case Gauchet gave quinine in opposition to the wishes of the patient, who stated that she had taken it before, and that it always caused her to spit blood.

"Of the bullous form of the eruption I have less specific details. M. Panas affirms that the administration of large doses of quinine (two to three grammes, as is the custom in Algiers and Greece) provoked an eruption presenting the characters of the bullæ of pemphigus.

"In one case, reported by Professor Schuppert, six-grain doses produced an intense localized dermatitis, with commencing gangrene of the scrotum. In one of Professor Köbner's cases, quinine always produced an erysipelas of the scrotum. In several cases this special tendency to irritate the skin of the genital parts is noted.

"In many of the cases reported, several successive outbreaks of the eruption occurred, because the physician either repeated the dose without suspecting the causal association of the remedy and the disease, or did so because he wished to satisfy his own mind as to the patient's susceptibility. It is worthy of note that what may be called the idiosyncratic intolerance of the drug may be an acquired peculiarity. In a number of the cases, my own among them, the patient was previously accustomed to take large doses of quinine without any unusual effects upon the skin.

"The cutaneous disturbances have seemed to follow indifferently the exhibition of any of the preparations of cinchona. In two or three cases where preparations of the bark were given, the physician, thinking that the irritant effects might be due to some adulteration, substituted the alkaloid, with a repetition of the same effects. In a majority of the cases, what may be regarded as small doses—one to two grains—were given. The subjects of these observations, I had almost forgotten to state, were mostly females. The greater fineness of the skin and its more exquisite sensibility in women would explain its relatively greater susceptibility to irritant action.

"The quinine exanthem derives its chief clinical importance from its close resemblance to the rash of scarlatina. This resemblance is rendered more real from the congestion and swelling of the mucous membrane of the throat and fauces and the subsequent desquamation, which may be more or less complete, and may last from a few days to several weeks. In one case, reported by Dr. Pflüger, there was exfoliation of the epidermis in large lamellæ, giving a complete cast of the fingers, like a glove. When the eruption is accompanied with fever and high temperature, as in the cases of Professor Köbner and two other reporters, its similitude to scarlatina is so perfect as to deceive the most skilful and experienced physicians, but all these cases are quite exceptional. The differential diagnosis is usually easy, from the absence of fever and high temperature, the sudden development of the rash, and its rapid subsidence upon the suspension of the medicine."

C. Urticaria, **44**, 502; **72**, 154; Lente, **143**, Nov. 16, '78, 388.
Pemphigus, **61**, 214.
Erysipelas, Perroud, **106**, 2: 241; Satterlee, **155**, Dec. '74.
Rhus poisoning, Cantrell, **151**, Aug. '77.
Scleroderma, **76**, 410.

Cinchonidiæ Sulphas.

A. Urticaria and pruritus in region of the parotid gland, **183**, Dec. '78, 224.
Erythema and pruritus, Rankin, **179**, '78, 327.

REMARKS.—The officinal preparations of Cinchona are: *Extractum Cinchonæ Fluidum; Extractum Cinchonæ; Decoctum Cinchonæ Flavæ; Infusum Cinchonæ Flavæ; Tinctura Cinchonæ; Tinctura Cinchonæ Composita; Infusum Cinchonæ Rubræ; Decoctum Cinchonæ Rubræ; Quiniæ Sulphas; Quiniæ Valerianas; Cinchoniæ Sulphas.*

CITRUS LIMONUM, *Risso*, U.S.

C. Scorbutus.
Two cases of erythematous lupus were treated with the juice of three lemons daily, one greatly improved, the other was cured; Wardell, **137**, 2/70, 333.
Lupus,* Cooke, **137**, 2/59, 662.
Psoriasis, Wright, **187**, '47, 387.

D. Acne indurata, ulcerating lupus, freckles, **43**, 205.
As an anti-pruritic in lichen æstivus, **201**.
Dry chronic eczema of fingers, lips and face, **205**.

REMARKS.—The officinal preparations from the lemon are: *Oleum Limonis; Spiritus Limonis; Syrupus Limonis; Acidum Citricum* (*q. v.*), and *Syrupus Acidi Citrici.*

The reports of Wardell and Cooke (*supra*), as to the efficacy of lemon juice in lupus, certainly merit the careful consideration of all who are interested in the treatment of this most obstinate disease. My only personal experience thus far is confined to a single case, which most persistently relapsed after operation. This patient took about an ounce and a half of the juice, together with large doses (eight ounces daily) of cod-liver oil. This was kept up with slight intermissions for several months, during which no relapse occurred. The result, however, if the internal treatment had anything to do with it, may, with equal fairness, be attributed to the oil.

CLEMATIS ERECTA, *L.*, P.; U.S.D.

B. Vesicles and ulcers **23**, 3: 338.

D. Cancerous ulcers, **20**, 170.

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* A lotion of hydrarg. bichloridum was also employed. (H.G.P.)

CLEMATIS VITALBA, *L.*, P.; U.S.D.

B. Redness, vesications and ulcers, **23**, 3: 333; **51**, 3: 28.

D. A decoction of the leaves is a prompt and powerful detergent of sordid atonic and scrofulous ulcers, **26**, 329.

COCA (*Erythroxylon Coca, Lam.*), F.; U.S.D.

A. Branny desquamation and scattered macules (Mantegazza), **24**, 2: 78.

COCCULUS (*Anamirta Cocculus, W. et A.*), P.; U.S.D.

B. ? (From application to the scalp.) Body and arms covered with scarlet eruption, Thompson (Med. Ex. '52), **42**, 3: 399

C. (Picrotoxin) Hyperidrosis, Murrell, **162**, Oct. '79.

D. Phthiriasis, **19**, 1: 79; **24**, 2: 49; **44**, 210; **206**.
Trichophytosis, **2**, 110; **10**, 2: 354.

COFFEA (*Coffea Arabica, L. et al. spec.*), P.; U.S.D.

C. Eczema, Gigot-Suard;* **87**, 138.

REMARKS.—A wine, or a decoction of unburnt coffee, are often valuable in eczema when a diuretic effect is desired. I have used it in this manner for several years. More recently a fluid extract has been recommended, and caffein itself lauded as a diuretic.

COLCHICUM (*Colchicum autumnale, L.*), U.S.

A. Diaphoretic, **13**, 85.

C. Urticaria, prurigo, **9**, 864.
Eczema, **203**.
Peliosis, **210**.

REMARKS.—I have frequently employed colchicum to advantage in chronic affections of the skin, and more particularly in eczema and psoriasis when complicated with a gouty condition. I have usually given a wine or tincture made from the fresh root.

The officinal preparations are: *Extractum Colchici Aceticum; Extractum Colchici Radicis Fluidum; Vinum Colchici Radicis; Extractum Colchici Seminis Fluidum; Tinctura Colchici; Vinum Colchici Seminis.*

COLLODIUM, U.S.

D. Erysipelas, excoriations, moist eczema, pemphigus, etc., **24**, 887.
Carbuncles, erysipelas, intertrigo, herpes labialis et preputialis, zoster, lichen, lupus, acne, chronic erythema, etc., **10**, 1: 149.

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* L'Herpétisme. Paris, 1870.

REMARKS.—As a protective in zoster, collodium is exceedingly useful. As a basis for further medication, it furnishes the following officinal preparations: *Collodium cum Cantharide; Collodium Flexile.* Flexible collodion has been recently recommended by Scarenzio (**131**, Oct. '79, 263), as a means of preventing the spread of the irritation produced by the application of chrysophanic acid.

CONĪUM (*Conium maculatum, L.*), U.S.

A. Formication, **10**, 2: 339.
Diaphoresis, erysipelatous inflammation, bluish spots, or a rosaceal eruption, **1**, 890.

B. Burning feeling followed by paralysis of sensation, Harley, **2**, 392.

C. Its action on the lymphatic system is evidenced by the resolution of glandular engorgements and the cure of diseases of the skin, **22**, 1: 71.
Rebellious *dartres*, tinæ and ulcers of bad character have sometimes yielded to the action of this drug (*ib.*), 73.
Obstinate chronic eruptions, **7**, 673.

D. Scrofulous ulcers, **95**, 207.
The pains of cancer are particularly amenable to its influence, **2**, 393.
Carcinoma, ulcus, scabies, **20**, 90.
Pruritus, Piffard, **143**, Oct. 26, '78; **207**.

Conia.

A. Sweating of the feet, **43**, 518.

B. Anæsthesia, Gubler, **117**, Jan. 3, '75, 90.

REMARKS.—The officinal preparations of hemlock are: *Extractum Conii Fructus Fluidum; Extractum Conii Alcoholicum; Tinctura Conii; Extractum Conii; Succus Conii.* It is notorious that most of the preparations of conium are unreliable. The author relies exclusively on Squibb's fluid extract made from the unripe fruit.

COPAIBA (*Copaifera Lansdorfii, Desf.*), U.S.

A. Pruritus, **47**, 189; **205**.
Erythema, **67**, p. II., 36; **3**, 2: 605; **4**, 465; Fox, **137**, 1/67, 455; **205**; **206**.
Roseolous eruption, **4**, 465; **1**, 286; **47**, 189; **210**.
Urticarial eruption, **4**, 465; **29**, 321; **32**, 1: 808; **47**, 189.
Vesicular eruption, **1**, 286.
Bullæ, Hardy, **178**, April 1, '69; **206**.

C. Psoriasis, **67**, p. I., 119; **74**, 70; Purdon, **125**, '71, 393; Simms, **116**, 1/69, 235; **205**.
Urticaria, Dessau, **155**, Dec. '75, 620.

REMARKS.—The officinal preparations are: *Balsamum Copaibæ; Oleum Copaibæ;* and *Pilulæ Copaibæ.* For diuretic purposes the author prefers the unofficinal *Resina Copaibæ.*

CORYDALIS BULBOSA, *Pers.*

D. Eczema, **35**, 92.

COTULA (*Maruta Cotula, D. C.*), U.S.

B. The fresh plant, bruised and applied to the skin, vesicates, **28**, 32.

CREASOTUM, U.S.

B. When concentrated is caustic, **6**, 570.

C. Hyperidrosis, **24**, 791.

D. Chronic eczema, psoriasis, lichen, **24**, 792.
Slight scaly affections, **3**, 1: 116.
Lichen simplex, **207**.
Intertrigo, impetigo, **1**, 791.
Trichophytosis barbæ, warts, corns, condylomata, **10**, 1: 773.
Psoriasis, Squire, **146**, Oct. 17, '68.
It sometimes acts very favorably in allaying the intense itching of prurigo, and more decidedly even in cases of chronic eczema, **10**, 1: 773.

REMARKS.—The officinal preparations are: *Aqua Creasoti* and *Unguentum Creasoti.*

CROCUS (*Crocus sativus, L.*), U.S.

A. Diaphoretic, **49**, 4: 89.
Colors the perspiration, **1**, 822.

CUBEBA (*Piper Cubeba, L.*), U.S.

A. Urticarial eruption, **2**, 499; **6**, 616; **10**, 2: 655; North, **115**, 6: 221.
Vesicular eruption, **1**, 718; **32**, 1: 699.

REMARKS.—The officinal preparations are: *Extractum Cubebæ Fluidum; Tinctura Cubebæ; Oleum Cubebæ; Oleoresina Cubebæ; Trochisci Cubebæ.*

CUNILA PULEGIOIDES, *L.*, N.D.

A. Diaphoretic, **31**, 6.

CUPRUM.

A. Yellow tinge of the skin (from swallowing a half-penny), Cobbet, **137**, 2/31, 294.
Perspiration bluish-green (in a coppersmith), Clapton, **146**, 1/68, 658.

Cupri Acetas.

A. Diaphoresis, icterus, Langenbeck, **120**, '51, 420.

C. Pruritus, and especially the kind which occurs without visible lesion, Rademacher, **16**, 10: 545.

D. In chronic diseases of the scalp, when indolent and obstinate, **29**, 117.
Trichophytosis, **209**.

Cupri Arsenias, P.

B. Vesicles, pustules, "*plaques muqueuses*," and ulcerations on the parts exposed to the action of the coloring matter (in makers of paper colored with Schweinfurt green), Pietra Santa (**174**, Sept. '58), **126**, '60, 961.
Ugly-looking ulcers on the hands, face, neck, and other parts of the body to which the poison finds access (in makers of artificial flowers), Hassal, **137**, 2/60, 535.

Cupri Sulphas, U.S.

C. Eczema and pellagra when marked by ill-nutrition, Barduzzi (L'Independente, Nov. 5, '78), **188**, Dec. '78.

D. Its chief value is as an external application. When applied in solid form to ulcers, it destroys flabby granulations and exerts a powerful exciting influence. Its solution acts more feebly and is sometimes employed as a dressing for indolent ulcers, **18**, 43.
It unites with the albuminous substances on sores and forms an insoluble albuminate, which coats the surface and in an imperfect manner may take the place of the lost cuticle. Indolent forms of impetigo, after resisting the more usual applications, will sometimes yield to sulphate of copper, **5**, 204.
Pernio, **210**.

Cydonium (*Pyrus Cydonia*, *L.*), U.S.

D. Dermatitis (mucilage of the seeds), **32**, 1: 32.

Cynoglossum officinale, *L.*, U.S.D.

C. and **D.** Verrucæ, 35: 115.

Daphne Gnidium, *L.*, U.S.D.

B. The bark is irritant, **25**, **35**.

D. Tinea, *dartres*, **48**, 4: 29.

Delphinium (*Delphinium Staphisagria, L.*), U.S.

A. In poisonous doses produces anæsthesia of the skin, Falck and Rörig, **30,** 634.

B. Reddens the skin, **23,** 3: 283.
Pure delphinia produces inflammation of the skin with free desquamation of the epidermis, **24,** 2: 260.

D. Pediculi, acari, **20,** 165, and many others.
Fungous ulcerations, **2,** 38.
Ulcers and eruptions, **23,** 3: 283.
Pruritus, Piffard, **190,** Feb. 11, '71, 142; **78,** 79.

Digitalis (*Digitalis purpurea, L.*), U.S.

A. Diaphoresis and a peculiar eruption, **2,** 265, 273.
Urticarial eruption, followed by desquamation and complete loss of hair, finger and toe-nails, **206.**

C. Purpura, **4,** 273.
Erysipelas, **2,** 272.
Eczema, **61,** 191; **87,** 138.

D. Pruritus, **61,** 511; **207.**
The infusion as an anodyne in painful eruptions and ulcerations, **22,** 1: 81.

Remarks.—The officinal preparations are: *Extractum Digitalis ; Extractum Digitalis Fluidum ; Tinctura Digitalis ; Infusum Digitalis.*

Dioscorea alata, *L.*, N.D.

B. (Juice of the root) Pruritus and desquamation, **36,** 2: 323.

Dipsacus Sylvestris, *Mill.*, P.

D. Warts, **35,** 97.

Dracontium (*Dracontium fœtidum, L.*), U.S.

D. Contused leaves to recent wounds and ulcers, **31,** 133.

Drosera (*Drosera rotundifolia, L.*), P.

B. Vesicates, **23,** 2: 40; Haller, **36,** 2: 327.

D. The juice as a caustic for warts and corns, **23,** 2: 40.

Dulcamara (*Solanum Dulcamara, L.*), U.S.

A. Diaphoretic, **1,** 377; **11,** 70; **23,** 1: 272; **52,** 107.
Increased sensitiveness of the skin, Wood, **6,** 69; **43,** 552.

Red scaly eruption, Carrère, **36**, 5: 62.

Erythematous redness, Wood, **6**, 69; **2**, 82.

Urticarial eruption, Hoppe, **24**, 2: 172.

Pruritus and eruptions, **3**, 2; 97.

Most writers agree that it specially affects the skin, causing itching, burning, and even eruption, with much perspiration, **1**, 377.

Occasionally dulcamara gives rise to an erythematous eruption on the skin, a fact that should not be lost sight of in considering the efficacy of the medicine in cutaneous diseases, **10**, 1: 952.

C. *Dartres*, scrofula, syphilis, affections accompanied with much irritation, as prurigo, psoriasis, etc., **3**, 2: 97.

Psoriasis and pityriasis, pustular, vesicular, and scaly affections, **2**, 83.

Herpetic eruptions, **21**, 2: 70; **45**, 1: 174.

Eczema, **65**, 195; **66**, 81; **86**, 1: 109.

Squamous eruptions, **54**, 1: 629; **86**, 1: 109.

Extensive squamous and crusty *dartres* yield more readily than simple furfuraceous isolated ones, **26**, 405.

Rebellious eruptions and scrofulous ulcers, Hufeland (*op. cit.* p. 244).

Psoriasis, **57**, 31; **86**, 2: 122; Wright, **187**, '47, 16: 387.

"It is now upwards of seven years since I first tried the Dulcamara for the cure of obstinate diseases of the skin. I was induced to do so by the perusal of a short, but well written practical essay on the subject, by the learned Professor of Botany in the University of Goettingen, Dr. Althoff. This gentleman relates ten cases of cutaneous eruption, which he describes as analogous to the itch, but not the true itch, all of which were cured by this remedy. He confesses at the same time that it failed in a number of others. Professor Althoff and the other German physicians who employ it, seem to have taken their hint concerning it from the essay of Mons. Carrère on the Dulcamara.

"Out of twenty-three cases of Lepra Græcorum,* in which I have tried it, two only have resisted its action. All the others were completely cured. Crichton, **96**, 145.

REMARKS.—The officinal preparations are: *Decoctum Dulcamaræ; Extractum Dulcamaræ; Extractum Dulcamaræ Fluidum.*

EPIPHEGUS (*Orobanche Virginiana, L.*), N.D.

D. Obstinate ulcers, **27**, 2: 9.

ERGOTA (*Claviceps purpurea, Tulasne*), U.S.

A. Furuncles, **43**, 549.

Vesicular eruption with petechiæ, **2**, 545.

Long-continued use produces anæsthesia, followed by itching and formication, and finally gangrene, **24**, 2: 374.

Sphacelus occurs at parts most distant from centre of circulation. The skin reddens, then becomes pale and wrinkled. Sometimes there are violet, and later black spots of gangrene, **26**, 985.

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* Psoriasis of modern writers (H. G. P.).

C. Prurigo, Whittaker, **119**, Apr. 3, '75.

Rosacea, Eldridge, **155**, Oct. '79, 361; **207**.

Psoriasis, **208**.

Hyperidrosis, **72**, 127.

Purpura, Bauer, **120**, No. 35, '68; Lane, **116**, 2/74, 304; Cianciosi, (L'Independente, Mar. '75), **129**, '75, 228; **10**, 2: 697; King, **102**, Apr. '76, 593; Bulkley, **162**, Nov. '76; Richardson, **189**, '76, 67; Minich, **161**, 5: 502; **206**; **210**.

Urticaria, **206**.

D. In powder, hemostatic, **24**, 2: 386.

Nævus (hypodermic injection), Hammond, **109**, Oct. '76, 123.

REMARKS.—The officinal preparations are: *Extractum Ergotæ Fluidum* and *Vinum Ergotæ*.

ERYSIMUM ALLIARIA, *L.*, U.S.D.

A. Diaphoretic, **23**, 4: 46; **26**, 54.

B. Vesicates, **23**, 4: 46.

D. The juice to sordid, gangrenous, and carcinomatous ulcers (several authors), **48**, 1: 48; **26**, 54.

EUCALYPTUS (*Eucalyptus globulus, Labill*), *P.*, U.S.D.

A. Diaphoretic, and is in part eliminated by the skin, **4**, 119.

Sometimes produces eruptions (Gimbert), **161**, '74, 253.

EUONYMUS EUROPÆUS, *L.*, U.S.D.

D. The decoction of the young twigs and leaves is a very energetic detersive of inveterate, atonic, edematous and gangrenous ulcers. The powdered seeds destroy pediculi, **26**, 461.

EUPATORIUM (*Eupatorium perfoliatum, L.*), U.S.

A. Diaphoretic, **10**, 1: 576; **18**, 55; **33**, 2: 133.

C. Eczema capitis, **50**, 112.

Eczema (H.G.P.).

"James River Ringworm," an herpetic affection which attacked the thighs, scrotum, and parts adjacent to the anus, Knox, **27**, pt. II., 25.

REMARKS.—The only officinal preparation is the *Infusum Eupatorii*.

EUPHORBIA OFFICINARUM, *L.*, F.

B. Burning pain with intense redness, followed by inflammation and vesicles, **24**, 2: 838.

Euphorbia corollata, *L.*, P.; U.S.D.

B. Vesicates, **50,** 223.

Euphorbia Lathyris, *L.*, F.; U.S.D.

D. Eczema, **35,** 92.
Verrucæ, **20,** 144.

Euphorbium (*Euphorbia resinifera, Berg*), P.; U.S.D.

B. Redness, swelling, and vesicles, **1,** 402.

D. Verrucæ, **1,** 402.

Fermentum (*Torula Cerevisiæ, Turp.*), U.S.

C. Furuncles (Brewers' yeast, ℥ ss. twice daily), **44,** 181; **98,** 39; **205.**

Ferrum, U.S.

A. Acne, **15,** 340; **17,** 61.

C. Acne (Millet and Startin); ecthyma (Brown); eczema (Devergie); zoster (Betz); scleroderma (Arning); erythema nodosum, **17,** 78.
In chronic eruptions with bluish or violet margins and thin, ichorous discharge, **32,** 1: 395.

Remarks.—Iron is a drug which is as important in dermatology as in any other department of therapeutics. As a hæmatogenic it occupies the first place in the minds of most; and by some is regarded as almost the sole agent that can be depended on to increase the proportion of red corpuscles and improve the quality of the circulating fluid. It is therefore given on the slightest provocation by many physicians whenever they fancy that the blood needs enriching in this particular respect; in fact, many seem to regard it in the light of a food rather than a medicine, and prescribe it in large quantities and for long periods of time. I believe that this view is an erroneous one, and when acted on in practice often leads to results the reverse of beneficial. Careful experiment has shown that both mercury and arsenic possess the power, when properly administered, of increasing the proportion of red corpuscles, but one would hardly feel justified on that account in prescribing them in the same lavish manner.

But iron is a normal ingredient of the body and of the blood, and therefore may be regarded as a food, say some, and may be given in almost unlimited quantity, under the assurance that the blood will only appropriate so much as it needs, and that the excess will pass off without effect. This is pure theory, and is not justified, I think, by the facts. As well might any of the other ingredients of the red corpuscles be selected, and administered in like excess. From a therapeutic point of view iron should not be regarded as purely a food, but as a medicine, capable of accomplishing much good, when properly employed, but pregnant of evil when abused. With this caution it may be stated that the indications for the use of iron are the same in diseases of the skin as in other diseases and that the general condition, not the particular lesion, is to influence the choice of this drug. Physiological chemists, when referring to the subject of iron in the blood, speak of it in its elementary form, and not as an oxide, a chloride, a sulphate, or any other combination. It has seemed to me, therefore, far more rational to supply it in its simple form, and not as a salt that nature must decompose in order to get at the base, which is utilized as such, or perhaps united with other substances in forms not yet fully known to us. The evident preference for the proto- rather than the per-salts of iron, that is exhibited of late years by many experienced practitioners, is a step in the same and in the right direction. My own practice for some years has been, when iron simply was demanded, to give it in its simplest form, namely, the *Ferrum Redactum* of the pharmacopœia, which may be prescribed in pill form or in trituration, one grain of the pure iron being the usual maximum daily dose. If, in addition to the iron, it appears expedient to give other drugs, as sulphur or sulphuric acid, I prescribe the sulphur mixed, but not combined with the iron, and the sulphuric acid in a different potion, and not the sulphate of iron. Either the sulphur or the sulphuric acid are needed or they are not needed. If the latter, why give them? If they are needed, surely the quantity contained in the ordinary dose of sulphate of iron must appear rather small when compared with the doses of sulphur or sulphuric acid that are usually prescribed when given without the iron. So with many of the other preparations of this metal. This, however, does not exclude the appropriate use of certain salts of iron in particular conditions in which experience has shown them to be specially useful, as the chloride of iron in erysipelas, etc. The officinal preparations of iron are: *Ferrum Redactum; Ferri Chloridum; Ferri Citras; Ferri et Ammonii Citras; Ferri et Quiniæ Citras; Ferri et Strychniæ Citras; Ferri et Ammonii Tartras; Ferri et Potassii Tartras; Ferri Ferrocyanidum; Ferri Lactas; Ferri Oxalas; Ferri Phosphas; Ferri Pyrophosphas; Ferri Subcarbonas; Ferri Sulphas; Ferri Sulphas Exsiccata; Ferri et Ammonii Sulphas; Liquor Ferri Chloridum; Liquor Ferri Citratis; Liquor Ferri Nitratis; Liquor Ferri Subsulphatis; Mistura Ferri Composita; Pilula Ferri Carbonatis; Pilulæ Ferri Compositæ; Pilulæ Ferri Iodidi; Syrupus Ferri Iodidi; Tinctura Ferri Chloridi; Trochisci Ferri Subcarbonatis; Emplastrum Ferri.* In addition there is a host of unofficinal preparations, chemical and galenical and proprietary.

FERRI ARSENIAS, B.

C. Lupus, Biett, **107**, 4: 224.
Purpura, Porteous, **137**, 2/75, 84.

FERRI BENZOAS.

E. Eczema, **88**, 46.

FERRI CHLORIDUM, U.S.

C. Erysipelas, Bell, **150**, June, '51, 497; **13**, 110; **210**.

D. Erysipelas, Rillet (Gaz. méd. de Strasb.), **111**, 1: 576; Foster, **146**, 1/75, 362.

Vegetations, lupus, fungosities, **16**, 14: 586.
Anthrax, Guiseppe, **131**, 2: 114.
Pruritus vaginæ et ani, Blair, **137**, 2/74, 715.
Acne (in ointment), **209**.
Chromophytosis, **208**.

FERRI IODIDUM, U.S.

A. Papular, urticarial and eczematous eruptions, Boissière, **129**, Dec. 24, '42, 831.
Erythematous and pustular eruptions, **1**, 1,046.

C. Lupus, **9**, 750; T. Fox, **162**, Sept. '70, 140.
Eczema of infants, **59**, 193.
Scrofulous and syphilitic eruptions, **1**, 1,046.

FERRI PEROXIDUM.

D. Acne, **67**, p. II., 108.

FERRI SULPHAS, U.S.

D. Eczema (Percy), **179**, July 12, '79; **64**, 259.
Lichen æstivus, **203**.

FERRI SULPHIDUM, U.S.

C. Eczema of infants, **59**, 193.

FRANGULA (*Rhamnus Frangula, L.*), U.S.D.

C. *Scabies*, varix ani, **20**, 78.

FUMARIA OFFICINALIS, *L.*, F.; U.S.D.

C. Leprosy, **53**, 107.
Chronic cutaneous affections of an eczematous character, **28**, 11; **48**, 4: 6; **53**, 107–8; **54**, 1: 676.

D. Eczema, **35**, 92.

GALANGA (*Alpinia officinarum, Hance*), U.S.D.

C. Herpes, **20**, 37.

GALBANUM (*Ferula galbaniflua, Boiss.*), U.S.

B. Rubefacient and irritant to tender skins, **17**, 398.

REMARKS.—The officinal preparations are: *Pilulæ Galbani Compositæ; Emplastrum Galbani Compositum.*

GALEGA OFFICINALIS, *L.*, U.S.D.

A. Diaphoretic, **23**, 4: 212.

GALIUM (*Galium Aparine, L.*), P.; U.S.D.

C. Cancer, Bulley, **24**, 2: 512.
Psoriasis, Winn, **146**, 1/54, 144; **69**; 28; **70**, 28.

GENTIANA (*Gentiana lutea, L.*), U.S.

A. The sweat becomes bitter, **1**, 505; **2**, 313.

REMARKS.—The officinal preparations are: *Extractum Gentianæ; Extractum Gentianæ Fluidum; Tinctura Gentianæ Composita; Infusum Gentianæ Compositum.*

GERANIUM ROBERTIANUM, *L.*, U.S.D.

D. Fomentation in superficial inflammations of the skin, **26**, 478.
Condylomata, **35**, 167.

GLYCERINUM, U.S.

C. Acne, Gubler, **129**, No. 23, '70; Weisse, **110**, 2: 107; **203**; **210**.

D. Lichen, psoriasis, pityriasis, **9**, 359.
May be employed to advantage in various circumscribed affections of the skin, and particularly in such as are attended with itching, **10**, 1: 141.
Ichthyosis, **81**, 29.
Infiltrated eczema, **208**.

GNAPHALIUM STŒCHAS, *L.*

A. Diaphoretic, **23**, 4: 362.

GRAPHITES, P.; N.D.

A. It appears to influence the nutrition of the skin in a peculiar manner, **36**, 2: 406.

C. "Herpes exedens," Mayer, **134**, '25, 60; St. 2, 65.*
Eczema, Weinhold.†

D. Eczema (*ib.*); Piffard, **143**, Oct. 26, '78.

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* The results can hardly be attributed to the Graphite, as it was given mixed with antimony, sulphur, and calomel, and sometimes with dulcamara.

† Der Graphit als neuendecktes Heilmittel gegen die Flechten. Leipzig (1808).

GRATIOLA OFFICINALIS, *L.*, U.S.D.

C. As a purgative in ulcers and chronic skin diseases, **1**, 131.

GRINDELIA ROBUSTA, *T. & G.*, P.; U.S.D.

D. Rhus poisoning, Canfield (1859), **103**, 32: 414; (H.G.P.).

GUARANA (*Paullinia sorbilis, Mart.*), P.; U.S.D.

A. Urticaria, pruritus, Montegazza (Ann. d'Omodei, Apr. '65), **117**, Aug. 30, '67, 169.

GUAIACUM (*Guaiacum officinale, L.*), U.S.

A. Diaphoretic.
Exanthematous eruption, **2**, 321; **10**, 2: 596; **17**, 316.

C. In syphilitic affections, and in obstinate non-syphilitic eruptions, many authors.

REMARKS.—The officinal preparations are: *Guaiaci Resina; Tinctura Guaiaci; Tinctura Guaiaci Ammoniata.*

HAMAMELIS VIRGINICA, *L.*, P.; U.S.D.

D. Eczema and pruritus, Piffard, **143**, Oct. 26, '78.
Pruritus, **207**.

REMARKS.—The most reliable preparation of witch-hazel is a tincture made with strong alcohol, from the fresh plant. The various fluid extracts of the market by no means represent the entire virtues of the plant.

HEDEOMA (*Hedeoma pulegioides, L.*), U.S.

A. Diaphoretic, **10**, 1: 604.

REMARKS.—The only officinal preparation is the *Oleum Hedeomæ*, which is sometimes used to protect the skin from the attacks of the "black fly" of the Adirondacks, and from other insects.

HELIANTHUS ANNUUS, *L.*, P.; U.S.D.

A. Tingling in the skin (from eating the seeds), Davey, **138**, Oct. '48, 814.

HELIOTROPIUM MAJUS, *Tournef.*

D. Verrucæ, **51**, 4: 121.

HELLEBORUS (*Helleborus niger*, *L.*), U.S.

B. Vesicates, **2**, 24; **23**, 3: 370.

C. In rebellious *dartres*, **3**, 1: 646.

REMARKS.—The officinal preparations are *Extractum Hellebori*; *Tinctura Hellebori.*

HEUCHERA (*Heuchera Americana*, *L.*), U.S.

D. Has proved very beneficial in obstinate ulcers, **27**, p. I., 9.

HIPPOMANE MANCINELLA, *L.*

B. *Succus lacteus, venenosus, urens, vesicans, inflammans, depilatorius*, **31**, 145.
Burning, redness, swelling and vesicles, **36**, 3: 24.

HOÀNG-NÀN (*Strychnos Gautheriana*, *Pierre*).

A. Heat of surface with prickings, pruritus, and formication, Brosse.*
Severe pruritus, Fiot.

C. Ulcers, Fiot.
Scrofula, Féron.
Leprosy, Brosse; Féron; Desaint; Jobard; and others.

HUMULUS (*Humulus Lupulus*, *L.*), U.S.

A. Erythematous eruption on the face, with scattered pustules, Baumann (Wurt. Corr-Bl. '64), **42**, 5: 627.

D. (Lupulina) sedative in cancerous ulcers, hemorrhoids, etc., **24**, 2: 74.

REMARKS.—The officinal preparations are: *Tinctura Humuli*; *Infusum Humuli*; *Lupulina*; *Tinctura Lupulinæ*; *Extractum Lupulinæ Fluidum*; *Oleoresina Lupulinæ.*

HURA BRASILIENSIS, *Willd.*, P.; U.S.D.

C. Syphilis, leprosy, psoriasis, **43**, 356.

HURA CREPITANS, *L.*, U.S.D.

B. Severe swelling of the face, **36**, 3: 27.

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* Brosse and the other authorities are cited by Lesserteur in Le Hoàng-nàn, remède Tonquinois contre la rage, la lèpre et autres maladies. . Paris, 1879.

HYDRARGYRUM, U.S.

A. Increased perspiration, **3**, 1: 172; **16**, 17: 628; **30**, 807.

Eliminated by the skin in small quantity, **4**, 179; **16**, 17: 386; **17**, 628.

Urticaria, **69**, 182.

Purpura, Bazin, **89**, 74.

Alopecia, Kussmaul.*

Vesicles, **86**, 439.

Innumerable quantity of small, acuminate vesicles; at other times an eruption resembling scarlatina or roseola, **3**, 1: 172.

Eczematous eruption, Farquharson, **116**, 1/79, 267.

Herpes, impetigo, psydracia, furuncles, **30**, 807.

Erythema, vesicles, and bullæ—pustules, pruritus and heat, followed by desquamation, **47**, 199.

Vesicular and pustular eruptions on the skin, **13**, 122.

Pustular eruption over the whole body, **1**, 1071.

In mercurial poisoning the skin frequently shows changes, extending from simple erythema to the most varied eruptions in the form of miliaria, eczema, herpes, and impetigo; also excoriations around the anus, between the thighs and scrotum, leading to destructive ulceration, **43**, 266.

The effect of mercury is transmitted to the cutaneous structure, and exhibits itself sometimes in a simple increase of the natural exhalation from the skin, at other times in altered action in the part, **12**, 166.

Eczema mercuriale.—The disease occurs about eight or ten days after the beginning of a mercurial course; it is ushered in by heat and itching, first felt about the scrotum, thighs, groin, and bend of the arm. These parts are rough and faintly red. Though the disease spreads over the whole body, yet the lower extremities are usually attacked before the upper; the anterior portion of the body before the posterior. There is some swelling of the parts, frequent pulse, and white tongue. The eruption is vesicular, the vesicles very minute, though in the progress of the disease they attain the size of a pea. When ruptured, they are followed by irritable excoriations, from which a fetid discharge follows. This continues but a few days, when the sores dry up, then brown or black scales form and fall off, leaving a red surface. Sometimes the hair and nails fall off. The disease runs its course in from ten days to as many weeks; it rarely proves fatal. It does not seem to depend on the quantity of mercury given. It is sometimes caused by a single small dose of mercury, **12**, 171.

Affections of the skin are far from common in acute mercurialismus. Bazin has seen but three cases due to the internal administration of the drug, and Kussmaul appears to doubt their dependence on it. This, however, is a great error, as they present distinct and pathognomonic features, and Fournier has repeatedly diagnosticated them and verified his diagnosis. It is equally certain that mercury is sometimes eliminated by the skin, as was shown by Bordier, in the following manner: A patient suffering from acute mercurialismus was placed in a bath filled with acidulated water. The poles of a galvanic battery were placed upon his skin, and in a short time the copper plate of the positive pole was covered with a deposit of mercury. Hallopeau.*

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* **Untersuchungen über den constitutionellen Mercurialismus u. s. w. Würzburg, 1861, p. 325.**

B. Vesicles, **86**, 439.

Skin hot and itchy, soon followed by an eruption of red papules resembling rubeola,—sometimes the eruption resembles urticaria, and sometimes vesicles occur. McMullin, **127**, '06, 25.

The mercurial preparations applied to the skin, may, according to their degree of solubility or concentration, either produce no irritating effect at all, or may excite inflammatory action of varying degrees of intensity, even leading to the formation of sloughs. Mercurial ointment usually produces little local effect from a single application, but sometimes induces an erythematous or vesicular eruption. This is specially the case in old and rancid preparations, in which case the irritation is produced by the oxide of mercury that is formed under these circumstances, and which combines with the fatty acids to form an oleo-stearate of mercury. Some persons, however, are far more susceptible to its effect than others. Hallopeau, *op. cit.*

Dry papules, erythema, vesicles, pustules, pruritus, **205**.

Eczematous eruption, **206**.

C. Syphilis.

Eczema and psoriasis, Gubler, **117**, 87: 522.

Vesicular and pustular eruptions, **13**, 122.

Chronic and rebellious non-syphilitic eruptions, **54**, 2: 83.

Important modification of non-syphilitic eruptions follows the use of mercury, in consequence of its action on the secreting organs of the skin, **17**, 636.

The utility of mercury in the treatment of diseases of the skin is no less incontestable than in the treatment of syphilis, **3**, 1: 201.

In skin diseases generally, **210**.

D. Syphilis.

Chronic eruptions, **13**, 123.

Lupus erythematosus (*Emplast. Hydrarg.*), **97**, 2: 323.

Elephantiasis, **97**, 2: 106.

Phthiriasis pubis (*Ungt. Hydrarg.*), **1**, 1083.

Herpes, psoriasis, pruritus, acne, pityriasis, chloasma, and parasitic affections, **4**, 185.

REMARKS.—The officinal preparations of mercury are: *Hydrargyrum cum Creta; Hydrargyri Chloridum Corrosivum; Hydrargyri Chloridum Mite; Hydrargyri Cyanidum; Hydrargyri Iodidum Rubrum; Hydrargyri Iodidum Viride; Hydrargyri Sulphas Flava; Hydrargyri Sulphuretum Rubrum; Pilulæ Hydrargyri; Emplastrum Hydrargyri; Emplastrum Ammoniaci cum Hydrargyro; Unguentum Hydrargyri; Hydrargyrum Ammoniatum; Unguentum Hydrargyri Ammoniati; Hydrargyri Oxidum Rubrum; Unguentum Hydrargyri Oxidi Rubri; Hydrargyri Oxidum Flavum; Unguentum Hydrargyri Oxidi Flavi;*

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* Du mercure, action physiologique et thérapeutique. Paris, 1878.

Unguentum Hydrargyri Iodidi Rubri; Liquor Hydrargyri Nitratis; Unguentum Hydrargyri Nitratis.

The effects ascribed to mercury in the foregoing pages are, of course, not at all due to metallic mercury, but it was necessary to include them under the head of the element in this place, as the authorities cited failed to indicate otherwise. To the host of officinal preparations of this element a number of others are in use, some of which are considered later. This, however, seems a proper place to say a few words concerning a class of pharmaceutical preparations that have, until of late years, been little known and less used by the majority of the profession. I refer to triturations. In former days an ounce of metallic mercury was not an uncommon dose, and much more was sometimes given.* During the latter part of the last century, however, these doses underwent a very decided decrease, and at last it was discovered that a comparatively small quantity of this metal would produce decided constitutional effects, provided it was in a state of minute subdivision. Two preparations of this kind soon became favorites, namely: "blue pill," as it is now called, and mercurial ointment, the former of which is a trituration of mercury with conserve of roses, and the latter a trituration of mercury with a fatty excipient (lard and suet in the U. S. Ph.). Plenck, the founder of modern dermatology, made a large number of experiments in this direction, and relates † the results of rubbing mercury with the following substances, namely: mucus from the throat, yolk of an egg, white of an egg, blood and its serum, fresh bile, isinglass, mucilage of acacia, gum tragacanth, mucilage of quince seeds, marshmallow, manna, honey, simple syrup, linseed oil, and fat. Plenck's preference was for mercury triturated with mucilage of acacia (see Formulary).

Triturations of mercury with sugar, however, were already well known in England, "mercurius saccharatus" being found at most of the shops.

Later, Hahnemann proposed that a very large number of drugs should be prepared by this process, and selected milk sugar as the agent to be employed in the trituration; first, because it is supposed to be inert medicinally, and second, because its particles are hard and gritty, and well adapted to the comminution of other substances. Curiously, none of the standard pharmacopœias of the time adopted this method; and, at present, if we desire an officinal preparation of metallic mercury in the form of powder, we have offered us the *Hydrargyrum cum creta*, made by triturating mercury with prepared chalk. This substance is an almost impalpable powder without grit, and experience has shown that it is not wholly satisfactory as a triturant. Various amendments to the process have been proposed—the addition of resin, by Stewart (1843), of honey, by Squibb (1857), and finally, "W. E. Bibby (1876) has suggested a method which enables a pharmacist to prepare this medicament without the expenditure of much time, by substituting sugar of milk for about one-fifth of the chalk, which greatly facilitates the fine division of the metal" (Nat. Disp., 1st Ed., p. 728).

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* Not for its mechanical effects, as is sometimes done nowadays, but medicinally.

† A new and easy method of giving mercury to those affected with the venereal disease, etc., translated from the Latin by Wm. Saunders, M.D., Physician to Guy's Hospital. London, 1772. Plenck states (p. 30) that he obtained the idea of trituration from Philippus Ambrosius Marherr. Triturations were well known to the Arabian physicians of the 13th century. The writings of Ibn el Beïthâr contain frequent references to them.

Whatever the reason, whether from differences in the processes, or dishonesty in the manufacture, the *hydrarg. c. creta* of the shops is far from uniform, and is regarded by many as a very unreliable preparation. A few years ago the writer gave special attention to this subject, and embodied the results of his investigations in a short paper, read before the New York Academy of Medicine, and subsequently published (**143**, Dec. 1, '77). The subject of the paper was a comparison of milk sugar triturations of mercury and its salts with the ordinary officinal preparations of this drug. The following is extracted from that paper:

"The first chosen for examination was the 1x trituration of *mercurius vivus*, and it was compared very naturally with our own analogous preparation, the *hydrarg. c. creta*. Examined under the microscope the mercury in the former was found to be in a state of extremely minute subdivision, the majority of the separate globules being smaller than red blood-corpuscles, and many of them so small as to be endowed with Brunonian movement.

"Five samples of *hydrarg. c. creta*, obtained from Broadway drug stores, were then examined. These were found to vary greatly in their gross appearances, and likewise under the microscope. In some there appeared to be a notably larger proportion of mercury than in others, and in all of them the metallic globules were very much larger in size (average) than those in the *merc. viv.*

"Now when we administer mercury for its specific effect upon the blood or upon particular organs, the first essential is that it shall be absorbed. If the drug is in solution there is of course little difficulty about the matter, but if given in a solid form, it must either be capable of solution by the fluids of the stomach, or else its particles must be sufficiently minute to permit of their direct absorption as solids. The fact of the absorption of solids, at one time deemed impossible, has now been so thoroughly demonstrated, and especially as regards mercury, that we are prepared to understand how minute subdivision will facilitate absorption, when larger particles would pass the bowels without effect, or simply produce local effects, varying with the nature of the drug employed. We should therefore expect that, a given quantity of drug being used, the promptness of its specific effects would vary inversely with the size of the particles of which it is composed. If we submit this rational conclusion to the test of clinical experience in the cases of *hydrarg. c. creta* and *mercur. viv.*, we will find it easily verifiable. The latter, given in doses containing the same amount of mercury as the former, will produce the more prompt and decided effects.

"Turning from metallic mercury to its salts, we find an inviting field for exploration. The mercurous preparations are almost invariably given in the solid state, while the mercuric are administered both in the solid form and in solution.

"We are all of us aware that a single grain of calomel well rubbed up with sugar and given in, say, twenty divided but frequently repeated doses, will often produce the specific effects of the drug, while a single dose of twenty grains will as frequently fail to do so. Passing calomel, then, we come to another mercurous preparation, namely the protoiodide. This salt, in its condition of ordinary medicinal purity, was found, upon microscopical examination, to consist of comparatively large-sized masses composed of apparently smaller granules. Moderate pressure on the covering glass was sufficient to disintegrate these masses and to resolve them into much smaller particles, not exhibiting crystalline structure, and averaging about the size of red blood-corpuscles, or a little less. A gelatine-coated protoiodide pill was found to contain the drug in the same fine granular condition. Sugar-coated pills of French and American manufacture were also examined, and the mercury found to be in quite small particles. In all of these specimens the drug was in a very minute state of subdivision, and the greater part of it doubtless capable of direct absorption without previous solution. This is of importance when we consider that this salt is but sparingly soluble.

"The first decimal (1^x) milk-sugar trituration of the protoiodide was next examined. In this the salt appeared to the naked eye to be very uniformly distributed throughout the powder, and upon microscopical examination was found to consist of extremely minute particles, of decidedly smaller size than in the previously examined specimens. It is to be expected, therefore, that the protoiodide trituration will prove, *ceteris paribus*, more active than the pill, and such we have found it.

"Turning now to the mercuric preparations, we find the bichloride and biniodide most in use. For obvious reasons, triturations of the former were not examined microscopically. Gelatine- and sugar-coated pills of the biniodide, however, were carefully investigated. In the gelatine-coated pills we found the salt displayed as beautifully perfect crystals of varying size. In the sugar-coated preparations the drug was in small granular masses, held together by some not very soluble substance. In the first centesimal (2^x) trituration the biniodide was apparently well distributed through the powder, and upon examination was found in particles of very much smaller average size than in any of the other preparations. The biniodide of mercury is exceedingly insoluble, and there can be no question but that its absorption is therefore very much facilitated by minute subdivision. It is, moreover, a powerful irritant, and one would naturally expect that particles too large for direct absorption, or slow of solution, would be apt to produce more or less gastric distress before they are finally disposed of. That the iodides of mercury frequently produce gastralgia and diarrhœa is well known, and personally we believe that this is due to the local irritation produced by them, and not to any elective action of the drug. Since we have used the triturations, however, in preference to the ordinary pills, patients more rarely complain of disagreeable sensations. We have further been enabled to materially reduce the size of the dose, in order to obtain the desired effect. In other words, a larger proportion of the drug is utilized for *specific* purposes, while but a small amount remains to give rise to *local irritation*."

The British Pharmacopœia has adopted a $\frac{1}{10}$ milk-sugar trituration of elaterium, and the pepsine manufacturers throughout this country usually supply their product in this form, and not pure pepsine as some may suppose.

I have nothing to add to this except that I continue to use triturations of mercury and other substances with increasing satisfaction. Beside those mentioned I employ calomel, cyanide of mercury, black oxide of mercury, and corrosive sublimate in this form.

Hydrargyrum Ammoniatum, U.S.

D. **Chronic eruptions**, 1, 1109; 51, 5: 126; 54, 2: 73.
Chromophytosis, trichophytosis, phthiriasis, 6, 249.
Eczema, **acne**, syphilis.

REMARKS.—Of all the mercurial preparations, the white precipitate, in the form of ointment, is the one most frequently employed as an external application in diseases of the skin. Its principal use is in connection with eczema, in non-infiltrated forms of which it is almost always of service. The officinal ointment is greatly improved by the addition of a little compound tincture of benzoin, or the *Ungt. Benzoini* may be substituted for the simple ointment.

HYDRARGYRI BROMIDUM, P.; U.S.D.

A. Diaphoresis, furuncles, Höring (Ueb. d. Wirk. d. Brom. u. s. w., Tüb., 1838), **132**, 8: 548.

HYDRARGYRUM CUM CRETA, U.S.

C. Useful alterative in the cutaneous affections of infancy and childhood, **29**, 80.

HYDRARGYRI CHLORIDUM CORROSIVUM, U.S.

C. Eczema, **69**, 126; **74**, 51, Startin, **146**, 1/58, 602.
Lupus, **77**, 321.

D. Squamous affections, **13**, 124.
Psoriasis, lupus, impetigo, pityriasis, prurigo senilis, **1**, 1115.
Prurigo, **6**, 247.
Syphilitic papules of the face, **201**.
Acne, **97**, 1: 601.
Eczema (Trousseau), **113**, '46, 116.
Squamous eruptions, **54**, 2: 97.
Chronic herpetic and eczematous affections, **30**, 830.
Lentigines, **64**, 15.
Freckles, chloasma, acne, rosacea, pruritus genitalium, **43**, 279.
Chromophytosis, **84**, 285.
Vitiligo, **97**, 2: 132.
Trichophytosis.

REMARKS.—Corrosive sublimate may be administered internally in the form of solution, pill, or trituration. Externally, in solution in water, glycerine or alcohol, or in ointment. Its sparing solubility in water prevents its use in this menstruum, except in very dilute form.

In syphilis corrosive sublimate is often prescribed in connection with iodide of potassium dissolved in some vegetable menstruum. Care, however, should be taken that this latter does not contain alkaloids, as in this case the mercury may be precipitated in the form of an iodo-hydrargyrate of the alkaloid.

HYDRARGYRI CHLORIDUM MITE, U.S.

A. Burning, itching and scarlatinoid eruption, Englemann, **114**, '79, 647.

C. Lupus, "I know of no internal remedy which so quickly changes the action of lupus as calomel in purgative doses," **69**, 269.
Lupus (as above), **207**.
Eczema of infants, **77**, 195.

D. Inveterate eruptions, and especially syphilis, **1**, 1093.
Psoriasis, acne, herpes, impetigo, eczema, **44**, 329.
Calomel ointment often immediately removes the itching of pruritus ani, **5**, 184.
Eczema, **203**; **209**.
Condylomata lata.

HYDRARGYRI CYANIDUM, U.S.

C. Syphilis, **205**; (H.G.P.).

D. Eczema, acne, lupus, **55**, 34, 55, 90.

HYDRARGYRI IODIDUM RUBRUM, U.S.

C. Syphilis.
Obstinate syphilis with scrofulous complication, **1**, 1049.
Psoriasis, **43**, 282; **55**, 43.
Lupus, **86**, 2: 212.

D. Scrofulous ulcers, psoriasis, **1**, 1049.
Lupus (*ib.*); **67**, p. I., 151.
Lupous and syphilitic infiltrations, **209**.

REMARKS.—The officinal ointment, which contains sixteen grains of biniodide to the ounce, is an active irritant, and is too strong for ordinary application, except when a decided stimulant or mild caustic effect is desired. In the treatment of lupus, however, it may be made much stronger, even in the proportion of one in four, or equal parts of biniodide and ointment, as Hardy sometimes employs it.

HYDRARGYRI IODIDUM VIRIDE, U.S.

A. Severe pruritus; (H.G.P.).
Scarlatinoid eruption, Fournier.*

C. Pityriasis, eczema, herpes, impetigo in children, Neligan, **44**, 3111.
Lupus, Houghton.†
Psoriasis, **81**, 23.
Pruritus; (H.G.P.).
Syphilis.

D. Syphilis, acne, infiltrations, lupus, **209**.

REMARKS.—I have met with two cases in which pruritus appeared to result from the ingestion of the protoiodide of mercury. The first was a gentleman suffering from syphilis, to whom I gave a fifth of a grain of the protoiodide three times daily. At the end of ten days he returned complaining of severe general pruritus accompanied with urticarial wheals. I discontinued the mercurial, and prescribed for the (supposed) urticaria. He returned a week later, stating that the itching had disappeared. He resumed the protoiodide, and had a renewal of pruritus. A change was then made to the bichloride, which he took without further inconvenience. A few months later a return to the protoiodide was followed by a renewal of the pruritus. Since then I have been on the lookout for this complication, and have met with it once in a woman in one of my syphilitic wards at the Charity Hospital.

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* Hallopeau, *op. cit.*

† Article in Cyclopedia of Practical Medicine. London, 1834, Vol. III., p. 180.

I have treated successfully one case of obstinate general pruritus with this drug in small doses. In other cases of pruritus in which I have tried it has not proved of service.

HYDRARGYRI NITRAS (*Liquor Hydrargyri nitratis*, *Ungt. Hydrargyri nitratis*), U.S.

D. Acne, small moles and nævi, Startin, **146**, 1/55, 9.
Rosacea, **99**, 247.
Eczema, Milton, **44**, 312.
Scrofulous ulcers, condylomata, psoriasis, favus, **7**, 296.
Lupus, Startin, **146**, 1/55, 9; **7**, 296; **69**, 274; **86**, 2: 208 ; (H.G.P.).
Psoriasis, trichophytosis, chloasma, and favus, **44**, 312.
Prurigo, Squire, **187**, June 6, '68.
Condylomata and syphilitic ulcerations.
Pruritus ani (*Ungt. Hydrg. nit.*), **209**.

REMARKS.—About three years ago I had an opportunity of observing the effects produced by the hypodermic injection of *Liq. Hydrarg. nitratis.* A number of cases of syphilis were being treated in my hospital wards with hypodermic injections of bichloride and bi-cyanide of mercury. On one occasion the person having it in charge, by mistake injected under the dorsal integument of three patients ten minims of the acid nitrate of mercury. The immediate effect was intense pain; this was followed by swelling and redness of the integument, the tumor being in each case about the size of a hen's egg, and presenting a very close resemblance to a carbuncle. The integument later became black, and sloughed off, together with the connective tissue down to the muscles, leaving a cavity which healed by granulation in from six to eight weeks. In one of the patients salivation appeared on the second, and in the others on the third day.

The acid nitrate of mercury is one of the most efficient caustics in lupous, and scrofulous and syphilitic ulcerations, and in syphilitic condylomata. It is usually applied with a glass brush or rod, or with a camel's-hair pencil; a much better method is to wrap a little absorbent cotton around a match or wooden toothpick, which after use is thrown away.

HYDRARGYRI OLEAS.

D. Syphilis.
Phytoses, **210**.
Alopecia, psoriasis, pityriasis, Shoemaker, **196**, '79.

HYDRARGYRI OXIDUM NIGRUM HAHNEMANNI, P.; U.S.D.

C. Primary and secondary **syphilis, and obstinate eruptions, 1**, 1087.
Early syphilis; **(H.G.P.)**
Syphilis, **208**.

D. Chancres, **87**, 69.
Chancroids (1^x trit.), **204**.
Eczema of the scrotum, **209**.
Eczema, Piffard, **143**, Oct. 26, '78.
Hahnemann hat sich den Dank aller practischen Aerzte durch die Bekanntmachung der Zubreitung dieses Mittels erworben, **54**, 2: 87.

Remarks.—This preparation was called by its discoverer, and is known to homœopaths, as "Mercurius Solubilis," a name which is exceedingly inappropriate, as the preparation in question is *insoluble* in water, glycerine, alcohol, ether, chloroform, and oils. It is prepared, according to the U. S. Disp., by precipitating a dilute solution of nitrate of mercury with dilute aqua ammonia, and has, according to that authority, a composition expressed by the formula $NH_3O, 3\,Hg.\,O+NO_5$, which would make it an ammoniated nitrate of protoxide of mercury. There is some doubt, however, as to this being its real composition, and the name I have given at the head of this article is the one usually adopted.

I have used this preparation for a number of years, and have elsewhere (**87**, 69) recommended it as a local application for chancres and syphilitic ulcerations. Latterly, I am using it internally with great satisfaction in early syphilis, giving it in the form of trituration in doses of from one-fifth to one-half a grain.

Hydrargyri Oxidum Rubrum, U.S.

D. Dry eczema, favus, Wilson, **44**, 313.
Psoriasis, **71**, 32.
Pruritus pudendi, Rigby, **44**, 313.
Pityriasis capitis, chronic eczema capitis, of children, pruritus, **209**.
Eczema of the bearded face, **210**.

Remarks.—The officinal *Unguentum Hydrargyri Oxidi Rubri* has been to a certain extent superseded by a preparation having glycerole of starch as its basis, and containing the officinal or a less proportion of the red oxide mixed with it. It is an application well adapted to irritable surfaces.

Hydrargyri Sulphas Flava, U.S.

D. Phytoses.
Syphilis.

Remarks.—This is the favorite application in France in alopecia areata and pityriasis of the scalp. It is usually applied in the form of ointment in the proportion of about one part of the salt to twenty-five or thirty of simple ointment.

Hydrargyri Sulphidum Nigrum, G., U.S.D.

C. Lichen urticatus, psoriasis, **57**, 13: 33.

Hydrargyri Sulpho-cyanidum.

D. Eczema, psoriasis; (H.G.P.).

REMARKS.—I have employed ointments containing ʒ ss.— ʒ i. of the sulpho-cyanide to the ounce of excipient, with very satisfactory results in eczema and psoriasis. My experience with it has not been extensive, but thus far is favorable.

HYDRASTIS (*Hydrastis Canadensis*, *L.*), U.S.

C. Furuncles and anthrax, **207**.

C. & D. Chronic and indolent ulcers of the leg, **2**, 34.

HYDROCOTYLE ASIATICA, *L.*, P.; U.S.D.

A. Great itching over the whole body, **46**, 70.

C. Eczema, **60**, 254.
Leprosy, **46**, 70.
Leprosy: "In all these cases" (57 in number), "without exception, the progress of the disease has been arrested, ... frightful sores have been cicatrized, spots on the skin are less marked, and the skin itself has become more supple and firm and has recovered its sensibility." It seemed to act better after the previous exhibition of mercury and arsenic. Boileau (Pharm. Jl. from Madras Gaz.), **137**, 1/54, 451.
In anæsthetic leprosy good results have followed its use, but it possesses no claim to the character of a specific, attributed to it by some. It has been found useful in secondary syphilis, especially in those cases where the skin and subjacent cellular tissue are principally affected. In non-specific ulcerations and in skin diseases, it is of value both as an internal and external remedy. Waring.*
Lupus; (H.G.P.).
Psoriasis, **41**, 141.

D. Leprosy, **46**, 70.

REMARKS.—I have used hydrocotyle in a number of cases, the most important one being an extensive lupus on the back of the hand. Although using quite small doses the condition of the ulcer improved rapidly for about two weeks; at the end of which time orchitis appeared without apparent cause. The patient was at the time, and for several months had been, an inmate of the Charity Hospital. He did not then suffer, nor had he suffered for several years from gonorrhœa. The hydrocotyle was discontinued and other measures undertaken for the relief of his lupus. The testicular inflammation lasted several weeks. Females to whom I have given it complained of ovarian pain, and urinary irritation. Whether the drug exerts any special influence on the skin I am as yet unable from my own experience to say. That it exerts a very marked and special influence on the genito-urinary tract, I feel quite confident.

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* Pharmacopœia of India. London, 1868, p. 107.

HYDROPHYLLUM CANADENSE, *L.*

C (?). Rhus poisoning, **31**, 19.

HYOSCYAMUS (*Hyoscyamus niger, L.*), U.S.

A. Skin becomes red, Ruschenberger, **102**, July, '58, 97.
Erythema, **207**.
Urticaria, **69**, 182.
Maculæ, Blom, **36**, 3: 150.
Sweating and peculiar eruptions on the skin, Greding, **43**, 505.
Pruritus and blackish-blue spots, **1**, 869.
Hot, burning, pricking sensation in hands, feet, and legs, generalized purplish rash, specially about the face and neck, with great swelling of the parts, White, **137**, 2/73, 8.
Skin of the palms of the hands seemed like stiff thick leather, Sigmond (Lancet), **102**, May, '38, 189.
Graying of the hair, Hühnerwolf, **36**, 3: 148.
Skin dry, rustling like parchment (*pergamentartig raschelnd*), **43**, 505.

REMARKS.—The officinal preparations of hyoscyamus are: *Extractum Hyoscyami; Extractum Hyoscyami Alcoholicum; Extractum Hyoscyami Fluidum; Tinctura Hyoscyami; Hyoscyamia.*

HYOSCYAMUS ALBUS, J. B., F.; U.S.D.

D. Pruritus, pernio, **52**, 64.

HYPOXIS ERECTA, *L.*

D. Chronic ulcers, **31**, 46.

HYSSOPUS OFFICINALIS, L., U.S.D.

A. Diaphoretic, **48**, 4: 118.

C. Chronic affections of the skin (*ib.*).

IMPERATORIA OSTRUTHIUM, L., U.S.D.

D. Cleanses ulcers, **34**, 1: 255.
Eczema capitis, 53, 298.

INULA (*Inula Helenium*, L.), U.S.

C. ***Scabies*, 31**, 124.

D. **Pruritus, 24**, 714.
Scabies, **84**, 1: 155.

IODINIUM, U.S.

A. Diaphoresis, **1**, 1039.
Excreted by the skin, **7**, 73; Dorvault, **30**, **844**.
Erythema, T. Fox, **137**, 1/67, 455.
Erythematous, papular and pustular eruptions, **47**, 201.
Irritation and measly eruption, sometimes transient papules, Moi'sisovics, **32**, 2: 679.
Redness and pustules (Wright), furuncles, Brshesinsky (*ib.*).
Macular eruption scarcely disappearing under pressure, **6**, 253.
Eruptions resembling erythema, urticaria, and later, resembling prurigo, acne, or eczema, **3**, 1: 216.
Various eruptions appear, of which the most common is acne indurata, **10**, 2: 853.

B. Stains the skin yellow, and causes itching, redness, and desquamation.

C. Scrofulides, **203**.
Secondary syphilis, and several chronic affections of the skin, **1**, 1040; **11**, 289.
Late syphilis, **208**.

D. Lupus, **66**, 251; Kohn, **111**, 1: 34.
Herpes labialis and preputialis, **78**, 145.
Chloasma, **97**, 2: 17.
Chromophytosis.
Trichophytosis.
Leprous tubercles; (H.G.P.).
Late syphilis, **208**.
Clavi, **203**.

REMARKS.—The officinal preparations of iodine are: *Tinctura Iodinii; Tinctura Iodinii Composita; Liquor Iodinii Compositus; Unguentum Iodinii; Unguentum Iodinii Compositum.*

IODOFORMUM, U.S.

C. Painful and cancerous ulcers, **24**, 2: 986.

D. Relieves the pain of cancerous ulcers, **5**, 297.
Chancroids.
Pruritus ani, **201**.

IPECACUANHA (*Cephaëlis Ipecacuanha, Rich*), U.S.

A. Diaphoretic.
Burning heat diffused over the whole surface of the body, together with a kind of erysipelatous eruption covering every portion, similar to what is seen after exposing the naked skin to a burning sun. Circular patches with elevated, thick, and rounded edges, and of a fiery color, Turner, **115**, Oct. 25, '43.

B. Erythema and pustules, **5**, 362; **17**, 506; **6**, 498.
At first, small, discrete pustules, with a rather large areola; afterward, if the application be persisted in, large pustules, followed by severe ulceration, Duckworth, **18**, 408.
Heat, itching and pustules, which do not ulcerate or leave scars, Turnbull, **137**, May 7, '42.
Papules and vesicles changing into pustules, Hannay, **127**, Oct. '43.

C. Hyperidrosis, Woodhull.*
Hyperidrosis (Pulv. Ipec. Co.), Graves, **44**, 362.

Remarks.—The officinal preparations are: *Extractum Ipecacuanhæ Fluidum; Pulvis Ipecacuanhæ Compositus; Syrupus Ipecacuanhæ; Vinum Ipecacuanhæ; Trochisci Ipecacuanhæ.*

Iris Florentina (*Iris Florentina, L.*), U.S.

A. Diaphoretic, **32**, 2: 111.

B. Redness and slight burning (*ib.*).
Eczematoid and urticarial eruptions, Behier, **178**, '75, 500.

Iris Versicolor (*Iris versicolor L.*), U.S.

C. Eczema and psoriasis, Piffard, **88**, 45.

C. [?] "*Mirifice valet in ulceribus tibialibus et vulneribus*," Kalm, **31**, 9.

D. Eczema, Piffard, **143**, Oct. 26, '78, 321.

Remarks.—In eczema and psoriasis occurring in rheumatic and gouty subjects, and in those who are subject to biliary derangements, or are chronic sufferers from malaria, I have found a tincture of blue flag (one part fresh root, two parts alcohol), in doses of from five to ten drops once, twice, or thrice daily, of inestimable service. Externally in ointment it is useful in infiltrated eczema and in psoriasis.

Juglans (*Juglans cinerea, L.*), U.S.

B. Stains the skin dark brown.

D. Juice of the unripe fruit applied to leucodermatous maculæ, **27**, pt. II., 44.

Remarks.—The only officinal preparation is the *Extractum Juglandis.*

Juglans nigra, *L.*, U.S.D.

D. The rind of the unripe fruit is used to cure ringworm and tetter, **28**, 51.

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* Studies, chiefly clinical, in the non-emetic use of Ipecacuanha. Philadelphia, 1876, p. 47.

JUGLANS REGIA, *L.*, F.; U.S.D.

C. Scrofulous affections in general are radically cured by preparations of the leaves of *Juglans regia.* The therapeutic action is sufficiently constant to enable one to expect a cure in three-fourths of all cases. The effects of treatment are manifested slowly.*
Twenty to fifty days may elapse before effects are noticeable.*
Patients cured usually preserve the health obtained during the treatment; relapses are infrequent.*
The first noticeable effect of treatment is the improvement of the general health; later, the lesions improve.*
In certain non-ulcerated strumous ganglia, the effects of treatment are very slowly developed; in ulcers and fistulous tracts, on the other hand, results are much more prompt.*
In scrofulous affections more generally useful than the over-praised iodine, **26**, 689.

D. Ulcers and eruptions, **23**, 5: 54.

JUNIPERUS (*Juniperus communis, L.*), U.S.

B. Burning and slight redness, sometimes vesicles, **6**, 624.

C. Eczema and squamous eruptions, **54**, 1: 771.
Pruritus, C. Boeck, **175**, '75, 463.

REMARKS.—The officinal preparations are: *Infusum Juniperi ; Oleum Juniperi ; Spiritus Juniperi ; Spiritus Juniperi Compositus.*

KALMIA (*Kalmia latifolia, L.*), P.; U.S.D.

A. Peculiar pricking sensation, and moderate sweating, W., **115**, '34, 10: 213.

D. Herpetic affections, **27**, pt. I., 48.

KAMALA (*Rottlera tinctoria, Roxb.*), U.S.

D. Scabies, **2**, 216.
Trichophytosis, Moore, **122**, Nov. 15, '57.

KAVA (*Piper methysticum, Miq.*) P.; U.S.D.

A. Diaphoretic (Virey), **36**, 4: 218.
After long use induces chronic eruptions and ulcerations, Richard, **36**, 4: 218.
A peculiar kind of skin disease, called at Tahiti *arevareva*, results from a daily use of kava. In old drinkers the skin is dry, scaly,

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* **NEGRIER—Du traitement des affections scrofuleuses par les préparations de Noyer. Paris, 1856.**

cracked, and ulcerated, especially where it is thick, as on the hands and feet, Cuzent, **159**, '63, 86.

KRAMERIA (*Krameria triandra, Ruiz et Pav.*), U.S.

C. Purpura, **76**, 359.

D. Ichorous ulcers, **32**, 1: 307.

REMARKS.—The officinal preparations are: *Tinctura Krameriæ; Extractum Krameriæ; Extractum Krameriæ Fluidum; Syrupus Krameriæ; Infusum Krameriæ.*

LAPPA (*Lappa officinalis, All.*), U.S.

A. Diaphoretic, **29**, 129; **52**, 40; **54**, 1: 439–42.

C. Chronic affections (*Grind, Flechte, Krätze,* u. s. w.), *ib.*
Diseases of the skin, **51**, 2: 46.
(Decoction.) Impetiginous eruption on the leg, with ulceration or varicose veins, Graves, **138**, Dec. 8, '38.

D. Old ulcers, **52**, 40.
Obstinate and corroding ulcers, **32**, 2: 240.
Varicose ulcers, **48**, 1: 205.
Mitigates the pain of cancer and ulcers, **34**, 1: 85.
Alopecia, Hufeland, **26**, 128.

LAPSANA COMMUNIS, *L.*

C. Pityriasis, **51**, 4: 239.

D. Ulcerated papules, **52**, 26.

LAUROCERASUS (*Prunus Laurocerasus, L.*), B.

D. In prurigo, impetigo, inveterate psoriasis and other cutaneous affections, attended by severe itching and tingling, laurel water affords great relief to the patient, **2**, 379.

LEDUM PALUSTRE, *L.*, P.; U.S.D.

C. *Scabies, Tinea, Lepra,* **20**, 135.

LEONURUS LANATUS, *Spr.*

A. Diaphoresis and pruritus, Ghidella, **24**, 2: 912.

LEPIDIUM LATIFOLIUM, *L.*

B. The juice applied to the skin excites redness, inflammation, and purulent exudation, **25**, 109.

LEPIDIUM SATIVUM, *L.*, N.D.

B. The fresh leaves redden the skin, **23**, 4: 15.

C. (The root.) Diseases of the skin, **51**, 6: 23.

LINUM (*Linum usitatissimum*, *L.*), U.S.

B. Urticarial eruption, Parsons, **116**, 1/79, 773.

(In flax-spinners.) Papulo-pustular eruption on forearms, Purdon, **123**, '74, 507.

C. (Seeds.) Pemphigus, lichen ruber, and other affections, Sherwell, **143**, Apr. 13, '78, 289.
(Oil.) Psoriasis and dry eczema, **203**.

REMARKS.—The officinal preparations are: *Oleum Lini ; Lini Farina ; Infusum Lini compositum.*

LITHII BENZOAS, N.D.

C. Eczema, **87**, 139.
Psoriasis, **207**.

LITHII BROMIDUM, N.D.

C. Psoriasis, **207**.

LOBELIA (*Lobelia inflata*, *L.*), U.S.

A. Diaphoresis, **2**, 410; **7**, 584.
Horripilations, **22**, 2: 218.

B. Irritation of the skin, **24**, 2: 178.

REMARKS.—The officinal preparations are: *Acetum Lobeliæ ; Tinctura Lobeliæ ; Lobelina.*

LONICERA PERICLYMENUM, *L.*

D. Cutaneous diseases, **51**, 2: 350.
Deterges sordid ulcers, **34**, 1: 384.

LYCOPERDON BOVISTA, *L.*

D. Hemorrhage, hemorrhoids, ulcers, intertrigo, **20**, 280.

LYCOPODIUM (*Lycopodium clavatum*, *L.*), U.S.

D. Intertrigo and moist eczema, **9**, 379.
Erythema, eczema of the scrotum and breasts, and in cutaneous affections which resent aqueous or fatty applications, **26**, 606.

Remarks.—Beside the commoner applications, I have found lycopodium exceedingly useful as a diluent, and more particularly for precipitated sulphur, graphites, hydrarg. ox. nig., etc.

MAIS GUASTO.

C. Eczema, Bergonzoli, **131**, 7: 219; Rossi, **131**, 11: 51.
Psoriasis, Lombroso, **131**, 4: 160; Gamberini, **131**, 7: 164; Ferrari, **131**, 7: 165; Zambon, **131**, 8: 94.

D. Chloasma, eczema, Lombroso, **131**, 10: 258; Rossi, **131**, 11: 51, and 13: 39.
Eczema, Lesi, **131**, 11: 53; (H.G.P.).
Acne, pityriasis, Lombroso, **131**, 11: 52.

Remarks.—Lombroso* has made a very thorough study of certain products derived from spoiled corn, and has had prepared a "*Tintura di mais guasto*," and an "*Olio di mais guasto*," the former for internal, and the latter for external use. I have used the oil to advantage in dry eczema.

MAGNOLIA (*Magnolia glauca, L.*), U.S.

A. Diaphoretic, **33**, 1: 87.

MANDRAGORA (*Atropa Mandragora, L.*), P.; U.S.D.

D. (Bruised leaves). Eczema, **35**, 20.

MANGANESII OXIDUM NIGRUM, U.S.

D. Chronic eruptions, Grille, **54**, 2: 8.
Syphilides and old ulcers, **30**, 285.
Scabies, favus, and torpid ulcers, **24**, 373.
To cleanse fetid ulcers, **206**.

MATRICARIA (*Matricaria Chamomilla, L.*), U.S.

A. Diaphoretic, **43**, 406.

D. Ill-conditioned and cancerous ulcers, **1**, 627.

MAURICIA VINIFERA, *Mart.*

A. The volatile oil of the fruit is excreted by the cutaneous glands, and gives the skin a yellow color, Villa-Franca, **117**, Nov. 15, '79, 405.

MELISSA (*Melissa officinalis, L.*), U.S.

A. Diaphoresis, **36**, 3: 279.

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* I veleni del mais, e la loro applicazione all 'igiene e terapia, 181, '76, 38: 520.

Mentha Piperita (*Mentha piperita, Sm.*), U.S.

D. Pruritus vulvæ, Folsom, **145**, Mar. 25, '79.
Pruritus, **209**.

Remarks.—The officinal preparations are: *Aqua Menthæ Piperitæ; Oleum Menthæ Piperitæ; Spiritus Menthæ Piperitæ; Trochisci Menthæ Piperitæ.*

Mezereon (*Daphne Mezereon, L.*), U.S.

A. Diaphoretic, **2**, 485.
Pruritus, diaphoresis, and a peculiar eruption, **1**, 406.

B. The skin is very susceptible to the action of mezereon. When fresh, or when softened by soaking in water, the bark acts as a rubefacient, and at length occasions vesicles, which sooner or later discharge a watery fluid, and leave behind moist, painful, and offensive sores, which not infrequently are surrounded with pustules, and are extremely difficult to heal, **10**, 1: 409.
Produces inflammation, destroys the epidermis, and causes a serous effusion, **22**, 2: 249.

C. Old ulcers and eruptions, **1**, 406.
Scrofulous and chronic cutaneous diseases, **7**, 472.
The berries, slightly torrefied and made into one-grain pills, have cured *dartres* that resisted various treatment, **26**, 369.
Eczema and other skin diseases of internal origin in children, **92**, 72 and 114.
Pruritus ani; (H.G.P.).

Remarks.—The officinal preparations are: *Extractum Mezerei Fluidum; Unguentum Mezerei.*

Moschus, U.S.

A. Diaphoresis, **1**, 749.

Mucuna (*Mucuna pruriens, D. C.*), U.S.

B. Pain, redness, swelling, and even eruption, **7**, 729.

Myrrha (*Balsamodendron Myrrha, Nees*), U.S.

D. Ill-conditioned ulcers, **1**, 463.

Remarks.—The only officinal preparation is the *Tinctura Myrrhæ.* Myrrh is an ingredient in several officinal pills.

Narcissus Pseudo-Narcissus, *L.*, F.; U.S.D.

C. Hyperidrosis palmarum (hypodermic injection of one grain of sulphate of Narcissia), Ringer and Moorhead, **136**, Jan. '79.

NUX VOMICA (*Strychnos Nux Vomica, L.*), U.S.

C. The natives of India use the crude nut in doses of about two and a half grains taken after meals, in the treatment of "*Sunbheri*" (macular leprosy). To be of service, the drug must be long continued and the dose gradually increased. Baker, **173**, '25, 1: 139.

D. Alopecia and alopecia areata; (H.G.P.).

Brucia.

A. Formication and pruritus, Le Pelletier (**178**, '51), **42**, 2: 249.

Strychnia.

A. Formication and increase of sensibility, **6**, 78.
Formication and pruritus, and a sensation as if the skin was pricked with needles, or there may be diaphoresis and a miliary eruption, **1**, 896.

C. Pemphigus, **68**, 451.
Alopecia areata.

REMARKS.—The statement of Baker (*supra*), taken in connection with the statements made concerning Hoàng-Nàn (*q. v.*), raise hopes that nux vomica and its alkaloids may yet play an important part in the therapeutics of leprosy.

The officinal preparations of Nux Vomica are: *Tinctura Nucis Vomicæ; Extractum Nucis Vomicæ; Strychnia; Strychniæ Sulphas.*

ŒNANTHE CROCATA, *L.*, U.S.D.

A. Hyperæsthesia of the soles of the feet, roseolous eruption, Popham, **125**, '65, 484.
Purpuric spots, Thompson, **137**, 2/36, 850.

B. Excoriates the skin (*ib.*).

OLEANDER (*Nerium Oleander, L.*), P.; U.S.D.

B. Vesicates, **27**, 2: 35.

OLEUM CADINUM (*Juniperus Oxycedrus, L.* [?]), G.; U.S.D.

B. Inflammation, **68**, 72.

C. Psoriasis, **68**, 73.

D. Chronic eczema and psoriasis.
Pruritus, **97**, 1: 103.
Too active to apply to an acute eruption; its sphere of use fulnessis in subacute, chronic, and scaly eczemas, **26**, 473.

OLEUM CAJUPUTI (*Melaleuca Cajuputi, Roxb.*), U.S.

A. Diaphoretic, **1**, 362; **2**, 329; **7**, 689; **10**, 1: 593; **32**, 1: 645.

C. Scrofula, syphilis, elephantiasis, and other cutaneous diseases, **2**, 333.

D. Pernio, Robertson, **137**, 1/76, 36.

OLEUM GYNOCARDIÆ (*Gynocardia odorata, R. Br.*), U.S.D.

Chaulmoogra oil.

C. Leprosy: "I have seen two cases certainly cured, and several others much benefited. . . . . The remedy requires to be steadily persevered with for several months." Hobson, **126**, '55, 1: 50.
Leprosy, scrofula, syphilis, Monat (Ind. An. Med. Scien., Ap. '54), **91**, 9.
Leprosy, Macnamara (Ind. Med. Gaz., '66), **135**, 1: 410.
Scrofula, lupus, Byrd, **142**, 2/78, 156.
Six cases of leprosy decidedly improved under its internal use, but no cure was effected, although the oil was taken for from one to two years by several, Liveing, **146**, Aug. 23, '79.
Leprosy benefited but not cured, Cottle, **116**, June 28, '79.

C. & D. Leprosy, Young, **162**, Nov. '78; Hyde, **186**, Dec. '79, **208**.
Leprosy and obstinate skin diseases, **46**, 42.

OLEUM JUNIPERI (*Juniperus communis, L.*), U.S.

B. Redness and vesicular eruption, **9**, 1181.

OLEUM MAIDIS EMPYREUMATICUM (*Zea Mays, L.*).

D. Eczema, Slocum, **143**, Nov. 11, '76.

REMARKS.—By roasting corn on a hot iron he obtained from it an empyreumatic oil which he found useful as an application in certain cases of eczema.

OLEUM MORRHUÆ, U.S.

A. Itchy and miliary eruptions, **1**, 1055.

C. Chronic and obstinate eruptions (*ib.*).
Lichen scrofulosorum, **97**, 1: 387.
Strumous sores, sycosis, acne, prurigo, lichen, eczema, **70**, 29.
Lupus, Emery, **191**, Aug. '48, 65; **60**, 651; **70**, 171; **76**, 474; **6**, 667.
In scrofulous diseases of the skin it often produces the most salutary effects. Although not capable, of itself, of curing the local disease, it places the constitution in the best condition for receiving benefit from other specific remedies, **44**, 393.
The benefits of cod-liver oil in cutaneous diseases appear to be confined chiefly to those which are engrafted upon a scrofulous or a

cachectic state of the system. When an original inflammatory element prevails, the oil is worse than useless. Lupus, which is eminently a disease of scrofulous origin, is, more perhaps than any other, curable by this medicine, **10**, 2: 913.
Favus, eczema, psoriasis, ichthyosis (*ib.* 915).

OLEUM OLIVÆ (*Olea Europæa, L.*), U.S.

D. Pruritus genitalium, **44**, 416.

OLEUM ORYZÆ EMPYREUMATICUM (*Oryza sativa, L.*).

D. Eczema, psoriasis, trichophytosis, Carter, **41**. 75.

REMARKS.—This oil is obtained by heating ordinary rice on an iron plate. Its effects are probably similar to those of the empyreumatic oil of corn (*supra*).

OLEUM RICINI (*Ricinus communis, L.*), U.S.

A. Erythema and pruritus (Langier), **102**, '28, 207.

OLEUM SUCCINI, U.S.

B. Active rubefacient, producing irritation and slight inflammation of the skin when applied with friction, **29**, 191.

REMARKS.—The only officinal preparation is *Oleum Succini Rectificatum*, which, I believe it is almost impossible to procure in a pure state, as it is generally adulterated.

OLEUM TIGLII (*Croton Tiglium, L.*), U.S.

A. Eliminated in part by the skin, **13**, 79.
Erythema of the face, T. Fox, **137**, 1/67, 455.

B. In general it brings out, after a few hours, an eruption of minute red papules, which are always more numerous in proportion to the delicacy and vascularity of the skin, and which gradually are converted into pustules. Some of these have the flattened and umbilicated aspect of the variolous or the tartar emetic eruption, but the greater number are acuminate and rounded.
Many of them are apt to be confluent. They are surrounded by a red areola, and accompanied with a more or less severe burning pain and itching. The eruption augments for three or four days, and then remains stationary. Somewhat later the pustules break in part and form scabs, and in part wither away. If they are numerous and large they become confluent and form thick and extensive crusts. Between the sixth and twelfth days they separate and leave no cicatrices behind them, **10**, 2: 540.
When the oil is applied to the skin, of the arm, for instance, at the end of a variable period (half an hour or more), the skin loses its oily aspect (*elle se ressuie*), the greater portion of the oil having been imbibed by the epidermis. A part of it, however, will be found in the clefts of the epidermis and at the base of the hairs. After a

few hours slight itching begins to be felt. Heat and rubbing increases the pruritus, which increases in severity. After three to six hours redness appears. Later this redness is more vivid at certain points and little papules (*boutons*) appear, most frequently seated at the base of the hairs. The inflammation may cease at this point and the papules gradually subside in twenty-four hours or so without giving rise to pustules; or, a few hours later, the papules become transparent at their points from effusion of serum, and are transformed into vesicles. Still later the serum becomes milky and opaque, and the vesicles in turn become pustules, which enlarge and, as a rule, become umbilicated.

When the pustules are small they are usually found at the base of a hair, which they finally surround.

Three kinds of pustules depending on the degree of inflammatory action are met with: 1. The *intra-epidermic* pustule, which is small, sharply-defined, and superficial. Its location is between the layers of the stratum corneum, or between the stratum corneum and the stratum Malpighii. On disappearing it leaves no scar. This superficial pustule is sometimes found on top of a deeper-seated one, forming a sort of double-decked pustule. 2. The *sub-epidermic* pustule, more deeply-seated than the preceding, is located just under the epidermis, and lifts its entire thickness. It is surrounded by an inflammatory roseola, and is tender to the touch, but not otherwise painful. Its contents is creamy and it increases in size for two days, remains stationary during the third, and begins to fade away on the fourth. Union of several adjacent pustules sometimes occurs, forming a compound pustule of variable size. 3. The *dermic* pustule is the preceding with deeply inflamed base, involving the entire thickness of the skin and the tissues beneath. Its contour is less sharply defined, and it forms a hard and painful elevation, containing sometimes a little blood mixed with the pus, which gives it a darker color. In addition to these lesions a *follicular* tubercle or pustule sometimes forms. It is slightly elevated, hard, solid, reddish-brown, and not specially tender or painful, and at its pointed summit displays a trace of pus, usually already dried by the time it is observed. It arises from extension of the inflammation into a hair-follicle, following one of the more superficial pustules already described. It usually persists longer than the other lesions, and disappears by absorption in twelve or fifteen days.

The pustules of the second class, after drying, leave a coppery stain, which gradually disappears. Rarely the inflammation is so severe as to result in destruction of a portion of dermic tissue with a resulting cicatrix. Vautherin.*

D. Trichophytosis capitis, Horand, **106**, 7: 19; Ladreit de Lacharrière, **117**, Aug. 15, '76; Gassicourt, **117**, Nov. 15 and 30, '77; (H.G.P.).

Onoperdon Acanthium, *L.*

D. As a specific against cancerous affections, **23**, 4: 316.
(Contused herb and juice.) *Carcinoma faciei*, Stahl, Goelickius, Ellerus, Vater, **34**, 1: 87–8.

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* **Des Graines de Croton Tiglium, etc. Paris, 1864.**

OPIUM (*Papaver somniferum, L.*), U.S.

A. Creates a determination to the surface, and promotes perspiration. In some cases it causes a sense of pricking and itching, terminating occasionally in an eruption, **12**, 365.
The skin becomes hot and itchy, and sometimes eruptions appear, **1**, 835–7.
Eruption like measles or urticaria, **17**, 1076.
Sometimes intolerable itching and sudaminous rash, **2**, 120.
Severe pruritus, pale, diffuse, scarlatinoid redness, with darker points, followed by desquamation, Behrend, **114**, Oct. 20, '79, 627.
Papulo-erythematous eruption on nose, cheeks, backs of hands and arms, and papules on the trunk, **205**.
Urticaria, **69**, 182.

C. Syphilitic ulcers, **90**, 199.

D. Psoriasis, Holland, **44**, 437.
Phagedenic ulcers, Meyer, **113**, '46, 356.

Morphia.

A. Pruritus, papules (Brivois), **89**, 60.
Itching, pricking, and bright erythematous eruption, with minute conical papules, Fox, **116**, 1/79, 970.
Urticarial and erythematous eruption, **206**.
Erythema, **209**.
Papulo-erythematous eruption, **205**.

REMARKS.—The officinal preparations of opium are: *Acetum Opii; Vinum Opii; Tinctura Opii; Tinctura Opii Acetata; Tinctura Opii Deodorata; Tinctura Opii Camphorata; Extractum Opii; Pilulæ Opii; Confectio Opii; Suppositoria Opii; Emplastrum Opii.* It is also a constituent of *Pilula Saponis Composita; Pulvis Ipecacuanhæ Compositus; Suppositoria Plumbi et Opii; Trochisci Glycirrhizæ et Opii. Morphiæ Acetas; Morphiæ Murias; Morphiæ Sulphas; Liquor Morphiæ Sulphatis; Trochisci Morphiæ et Ipecacuanhæ; Suppositoria Morphiæ.*

PARAFFIN.

B. (Effects observed in workers in crude paraffin at Aberdeen.)
The workmen engaged in this manufacture have the skin over portions of their bodies, more especially of the hands and arms, but also of the feet and legs, brought daily for many hours at a time in contact with paraffin shale, and with the oily matters mixed up with it, the result being an eruption of nodules and pimples on the skin so exposed, especially breaking out on those who are for the first time engaged in it, lasting for a few weeks or months, and then generally diminishing or disappearing. In a few exceptional individuals the eruption does not disappear, but, assuming a chronic character, produces so marked and prolonged an affection

of the skin that the general health becomes impaired and the cessation of this employment becomes a necessity. The appearances differ in the two classes of cases, acute and chronic, and, while the essential alterations in the skin remain the same, the presence of inflammatory action in the acute, and its absence in the chronic forms, leads to a marked distinction between the two, and admits of their being separately described.

In the *acute* form of the eruption, which soon appears in those exposed to the influences of crude paraffin, the skin of the hands, wrists, arms, feet, and legs becomes covered with a rash of bright red nodules, closely approximate to each other, and usually largest and most numerous on the wrists, or wherever the dress tightly embraces the skin; the dorsal aspects of the parts being most severely affected, and the palms of the hands and soles of the feet enjoying a complete immunity. Similar nodules arise, though to a less extent, on the face, neck, and other parts of the body, to which oily matters find access.

On examining minutely the skin of those affected in this way, the following are the leading peculiarities of the eruption: the bright red nodules, hard to the touch, tender on pressure, varying little in size, which is about equal to that of a grain of barley, are of a rounded form, and consist each of a single hair-follicle, with the parts immediately surrounding it, which are inflamed, indurated, and reddened. The hair emerges from the very summit of the nodule, and the orifice of the hair-follicle is much enlarged and easily visible to the naked eye, as an aperture of a magnitude similar to that of a pin-hole in a card. The dilatation extends to the deeper part of the follicle, which forms the kernel of the inflamed knot, the retention of its contents evidently contributing to the inflammatory induration around. The gaping mouth of the follicle exhibits masses of cast-off epithelial scales, dry and friable, instead of greasy and tenacious; the nodule has little of the tendency to run on to suppuration observable in an ordinary *comedo*, and its contents cannot be squeezed out. On the contrary, the redness and induration, after remaining for some little time, gradually diminish, and finally disappear, leaving the hair-follicle enlarged, and its mouth gaping so as to exhibit the retained epithelial masses, these latter being rendered more distinct by continued retention and accumulation of dirt. In fact, the *acute* form of the eruption consists of successive crops of these nodules, which are thus at the same time seen in all stages of their growth, full development, and subsidence; while the skin between them, studded with the black, gaping mouths of such follicles as have already passed through or are about to undergo the process, retains, contrary to what is observed in the chronic form of the malady, its natural pliancy and elasticity.

In all paraffin-workers, patency and enlargement of the hair-follicles continue to some extent so long as they are engaged in this manufacture, and the black dots in the skin of their hands and face strike the eye of the observer at once; men with dark complexions and strong hair being especially deformed in this way, while fair complexions and light or reddish hair escape comparatively unaffected.

A few exceptional individuals, with swarthy complexions and hairy skins, suffer so much from an exaggerated patency of the follicles that they are compelled to quit their occupation and seek a more suitable calling. When the disease assumes this *chronic* form, it exhibits the following characteristics:

The backs of the feet and toes, the dorsum of the hand, and the backs of the fingers between, but not over, the joints, exhibit a peculiar honey-combed appearance of the skin, which is elevated, thickened, and inelastic, so as to prevent or render difficult and painful the flexion of the fingers and hand. These elevated honey-combed patches are of natural color, and not inflamed (except where an isolated papule exhibits the appearance described under the acute form), but consist of densely grouped arrays of hair-follicles packed with dry, brittle accumulations of epithelial scabs, so extensive as to be easily visible through the dilated mouths of the follicles, these latter being large enough to admit the extremity of an ordinary probe. The hairs themselves have disappeared from these patches, having probably become atrophic from the pressure of the epidermic masses, while cracks and bleeding fissures traverse the indurated parts, and in rare instances a follicular abscess gives variety to the picture. The knuckles of the fingers and toes, and the palms of the hands and soles of the feet, remain unaffected by the disease. In the subjects of the chronic malady the complexion is pale and the tongue foul, while the loss of flesh betrays the effects of the sleepless nights caused by the constant irritation and pain of the skin of the affected extremities.

The *modus operandi* of the crude paraffin in producing these results seems to be as follows: The oily matters in the shale, called "blae-oil," when separated, are both penetrating in their properties and irritating to the skin; and coming continually in contact with the epidermis, soak out the hair-follicles, where they create an irritation soon leading to induration and increased exfoliation of epithelial scales. This exfoliation is not counterbalanced by increased expulsion of the scales, owing doubtless partly to the large quantities cast off, and partly to the usual fatty and lubricating substances mixed up with them, being dissolved out and removed by the "blae-oil," thus leaving the brittle epidermic masses plugging the follicles and increasing the inflammatory irritation. (The palms of the hands, soles of the feet, and knuckles of the fingers and toes—places supplied with sweat-glands, but no hair-follicles—escape the irritation, from the watery contents of the sudoriparous pores presenting an obstacle to the ingress of the oil.) After a time the hairs on the most exposed parts become atrophic and fall out, but the continued retention of the epithelial masses keeps up the process in the follicles and the induration of the surrounding skin. Ogston, **126**, Dec. '71, 544.

PETROLEUM, G.; U.S.D.

B. Workmen in petroleum suffer from a scarlatinoid eruption (Köhler), or from furuncles upon exposed parts of the skin, **17**, 437.

D. Scabies, phthiriasis, prurigo, **10**, 1: 405–6.
Pediculi capitis, **97**, 2: 59; **206**.
Alopecia, **206**.

Phaseolus vulgaris, *L.*

D. Meal made from the seeds beautifies the skin, **23**, 4: **163.**

Phellandrium aquaticum, *L.*, F.; U.S.D.

D. (Powdered seeds.) Ulcers, **23**, 1: 446.

Phosphorus, U.S.

A. Increased temperature, perspiration, and irritation of the skin, **5**, 234.
Formication, Paul, **178**, Apr. 19, '60.
Icterus, Knoevenagel, **114**, '69, 157; Winckel, **121**, '79, 431.
Urticarial eruption, Woodman, **146**, 2/64, 386.
Purpura, Farquharson, **116**, 1/79, 266; **206.**

C. Eczema, Broadbent, **132**, 1/71, 538.
Psoriasis, **4**, 82; **55**, 17; Eames, **125**, Jan. '72; Broadbent, *loc. cit.*
Lupus, **4**, 82; **55**, 17; Wilson, **135**, 2: 307; Eames, **125**, Jan. '72.
Acne, **4**, 82.

Cazenave has recommended phosphorus in certain skin disorders, and he appends to his book a formula for its exhibition; which is, however, a very imperfect and dangerous one. In 1850 Dr. Burgess‘ said that he regarded this drug as a most valuable medicine in the treatment of lupus, psoriasis, and lepra. From that date until 1868 no further observation on that subject was published; but in that year Dr. Broadbent, in a paper entitled "An Attempt to Apply Chemical Principles in Explanation of the Action of Remedies," read before the Royal Medico-Chirurgical Society of London, referred to the cure of old standing cases of skin disease with phosphorus in support of his theory, phosphorus and arsenic belonging to the chemical group. In 1871 the same author read before the Clinical Society of London another paper on the same subject. In it the treatment of six cases of eczema and six cases of psoriasis was described. Of the cases of eczema three got perfectly well, two nearly well, and one only was not benefited. Of those which were cured, the most striking case was that of a girl aged twelve years, who had had eczema of the scalp, reaching over the forehead, for three months. She took phosphorus for three months, and had nearly recovered, when she was obliged to intermit the medicine on account of the occurrence of dyspeptic symptoms. After an interval of three weeks, during which some return of the disease was observed, the remedy was resumed; and, after taking it for another two weeks, she was discharged, quite cured. Of the six cases of psoriasis, two were uninfluenced by the remedy. The same year Dr. Eames treated the same subject in a paper read before the College of Physicians of Ireland Medical Society. His experience extended over a greater variety of diseases, and appears to have been somewhat more successful than Dr. Broadbent's. Thus, a case of acne indurata of four years' standing was cured in six weeks. Three cases of lupus were treated "with similarly satisfactory results;" that is to say, in one, marked improvement was noted in fourteen days, and cure was effected in nine months; in the other two cicatrization was complete in five months; and there was no return of the disease at the eighteenth month subsequent to treatment. In two cases of scrofuloderma the swellings disappeared, in one instance in six weeks, the other in three weeks. Psoriasis, pemphigus, and eczema yielded readily.

Probably, since many of these cases were of old standing and had already resisted other kinds of treatment, some other matter than the difficulty of its pharmaceutical preparation has interfered with a more general trial of phosphorus in skin disease. It is in such diseases as these that phosphorus is likely to be misapplied, and therefore to fall into disfavor. All those remedies which have not a specific power, and many of those which have such a power in one disease only, are liable to abuse in their general application to diseases for which they are unfitted, and are thus overlooked in many instances in which a more accurate knowledge of their mode of action would suggest their value.

According to Mr. Erasmus Wilson, phosphorus being a useful remedy in all those diseases which are due to debility of nerve-power, it should also be useful in those cutaneous disorders which are called nutritive, and in many of those which are called congestive. These conditions are probably the result of a paresis of the neighboring capillary vessels; and quite lately Dr. Colomiatti, of Turin, has ascertained in two cases of chronic psoriasis that a varicose condition of the vessels supplying the papillæ is a prominent pathological condition in that disease. Taking this paresis of the cutaneous capillaries as a proximate cause of many skin diseases, a wide field of usefulness is at once opened for phosphorus, for its power over this part of the circulation is evidenced by many facts. A cutaneous disorder coexistent with general nerve debility will very probably then be benefited by phosphorus, for it depends upon a partial paralysis of nerves, over which phosphorus has special power. But this latter condition may exist without any particular evidence of nerve exhaustion forthcoming—it exists thus in some of the febrile exanthemata; other indications for the use of phosphorus must therefore be sought. They will be found either in the mere existence of certain skin diseases, in which cases the action of this drug may probably be called specific, or in a clearer definition of the circumstances under which to remove the capillary paresis is enough to remove the disease without regard to the remote cause of it. Thus, as an example of the first proposition, herpes zoster and intercostal neuralgia so constantly concur that the rash is taken to be a symptom of the nerve disorder which is primarily recognized by pain; and, as I have said elsewhere, I believe I have observed this rash to be cut short in a case in which phosphorus was given to remedy the pain. Thus, the mere appearance of herpes zoster may be taken as an indication for phosphorus. But to exemplify the second proposition, I apprehend that a disease which finds its exciting cause in syphilis might fail to yield to phosphorus alone, although the proximate cause of the rash in that case may be the same capillary paresis which is the only tangible pathological condition in cutaneous eruptions excited by more occult morbid states, which are found amenable to this drug.

The indications for the use of phosphorus in skin diseases have yet to be defined. Speaking in general terms, the drug will be found serviceable for two contrary purposes—to remedy a cutaneous disorder, and to promote the rash in exanthematous diseases. For the former purpose, it must be used in the small or tonic dose; for the latter, in the large or stimulant. Used in the former manner, phosphorus will be a useful remedy in those eruptions which accompany general nervous exhaustion, or which can be traced to a local nerve derangement; in those which result from a nutrition of the skin, or in which a state of chronic congestion (or varicosity) of the capillaries is a prominent pathological condition. Used in the latter manner, it is useful to promote those eruptions which depend for their development upon an expanded condition of the capillaries—that is to say, in the rashes of the exanthematic fevers. It is interesting in this relation to recall the itching and irritation of the skin which, according to Löbel, occasionally attends on the use of this drug, and the occurrence of phagedenic spots on the surface of the body in some cases of poisoning with it, as recorded by Weickard. Thompson.*

Psoriasis, **208**; **209**; **210**; (H.G.P.).
Lupus, **202**; **205**; Piffard, **143**, July 21, '77.
Acne, **209**.
Eczema, phagedena, **208**.
Morphœa and neuroses of the skin, **208**.

D. Eczema of the lips, **207**.

PHYSOSTIGMA (*Physostigma venenosum, Balf.*), U.S.

A. Profuse perspiration and cool skin, **6**, 121.

REMARKS.—The only officinal preparation is, *Extractum Physostigmatis.*

PHYTOLACCA (*Phytolacca decandra, L.*), U.S.

C. and **D.** "*In ulceribus mali moris labiorum et mammarum cancro similibus,*" **31**, 71.

D. *Psora, tinea capitis,* **45**, 1: 50.

PILOCARPUS (*Pilocarpus pennatifolius, Lem.*), U.S.D.

A. Diaphoresis.

C. Hyperidrosis, Ringer and Bury, **162**, Dec. '76, 401; Engel, **145**, May 17, '79.
Ichthyosis; (H.G.P.).
Prurigo, Simon, **114**, '79, No. 49.
Eczema, Ord., **146**, 1/79, 40.
Syphilis, Lockwood, **146**, 1/79, 422; (H.G.P.).
Dermatitis exfoliativa; (H.G.P.).

REMARKS.—There are no officinal preparations of Jaborandi. The usual forms for the administration of this drug are an infusion or fluid extract. A salt of its alkaloid, *Pilocarpia*, may be used hypodermically.

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* Free Phosphorus in Medicine, etc. London, 1874, pp. 235–240.

PILOCARPIÆ IODO-HYDRARGYRAS.

C. Syphilis; (H.G.P.).

REMARKS.—Shortly after the introduction of Jaborandi, it occurred to the writer that its sudorific properties might be turned to account in the treatment of syphilis. I therefore administered jaborandi together with mercury, hoping to obtain the beneficial effects formerly attributed to the old *decoctiones lignorum*, represented in modern times by Zittmann's decoction. Subsequently I prepared a small quantity of the iodo-hydrargyrate of pilocarpia; and my friend, Dr. Chas. Rice, prepared a couple of ounces of it. This I had triturated with nine times its weight of milk sugar, and administered doses of two to five grains of the trituration in a number of cases of secondary and tertiary syphilis in hospital and private practice. With one exception the cases improved while taking the drug, but I am not prepared to say that they improved any faster than they would have done under other treatment. In a single instance (a case of rupia), sloughing attacked the ulcers, which rapidly increased in size, and, uncontrolled by local applications and large doses of iodide of potassium, finally resulted in death from exhaustion.

PINUS SYLVESTRIS, *L.*, U.S.D.

A. Diaphoretic, **34**, 1: 9.

D. Pruritus, Vogel, **34**, 1: 4.

PIPER (*Piper nigrum, L.*), U.S.

B. Redness and vesication, **1**, 714.

PISTACIA VERA, *L.*, F.

C. Chronic *dartres*, **48**, 5: 198.

PIX BURGUNDICA (*Pinus Abies, L.*), U.S.

B. In some persons a troublesome inflammation of a vesicular and pustular character follows its prolonged use, **2**, 200.
Eczematous eruption, Cazenave, **107**, '44, 1: 210.

REMARKS.—The officinal preparations are: *Emplastrum Picis Burgundicæ;* and *Emplastrum Picis cum Cantharide*, and other plasters.

PIX LIQUIDA (*Pinus palustris*, Mill. *et al. spec.*), U.S.

A. Copious red rash, **82**, 105; **14**, 472.
Rubeoloid and urticarial eruption, Waldeck, **121**, '78, 102.

B. The susceptibility of the skin to tar differs greatly in individuals. In some, a single application is followed by swelling and redness, increased warmth and tension, and even vesicles and bullæ; while in others long-continued tar applications produce no inconvenience, **9**, 577.
Tar acne (so-called).

C. Eczema, **82**, 105.
Furuncles, Hardy, **174**, Sept. 1, '74.
Psoriasis, Cazenave, **107**, 3: 224; **205**; Squire, **116**, Apr. 10, '75.

D. Psoriasis, Emery, **117**, '37, 69; **32**, 1: 919; **6**, 579.
Scabies, prurigo, lichen, and chronic eczema, **43**, 434.
Prurigo, **32**, 1: 919; **6**, 579; **97**, 1: 584.
In most persons tar diminishes pruritus, but in some it increases it excessively, **9**, 577.
Intertrigo, **99**, 104.

REMARKS.—The officinal preparations are: *Infusum Picis Liquidæ; Glyceritum Picis Liquidæ; Unguentum Picis Liquidæ.*

PIX LITHANTHRACIS (Coal-tar).

D. Chronic squamous eczema, psoriasis, ichthyosis, **24**, 805.

PLANTAGO MAJOR, *L.*, F.; U.S.D.

D. Ulcers, **31**, 14; **52**, 124.
Rhus poisoning, **203**.

PLATINI CHLORIDUM, B.

B. Pruritus followed by red papules, **129**, '40, 761.

C. Syphilis, Bollman; * **129**, '40, 763; (H.G.P.).

PLUMBAGO EUROPÆA, *L.*, P.; U.S.D.

B. Reddens the skin, **36**, 4: 226.
Vesicates, **23**, 1: 187.

D. The root in cancerous ulcers and scabies (*ib.*).

PLUMBAGO ROSEA, *L.*

B. The fresh bark of the root rubbed into a paste and applied to the skin causes pain and ultimately blisters, **'46**, 121.

PLUMRAGO SCANDENS, *L.*

B. The root vesicates, **36**, 4: 227.

PLUMBUM, U.S.

A. Jaundice, a great many authors.
Waxy hue, "lead skin," Richardson, **115**, '77, 382.
Peculiar discoloration of the skin, **3**, 1: 122.
Erythematous rash on skin, Leidersdorf, **101**, '73, 561.

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* COXE—American Dispensatory. Philadelphia, 1830, p. 510.

REMARKS.—The effects here attributed to lead were undoubtedly due in most instances to some of the salts of lead, but as the authorities cited failed to state the particular salt, I am forced to include them under the metal. The officinal preparations of lead are: *Liquor Plumbi Subacetatis; Liquor Plumbi Subacetatis Dilutus; Ceratum Plumbi Subacetatis; Plumbi Carbonas; Unguentum Plumbi Carbonatis; Plumbi Nitras; Plumbi Iodidum; Unguentum Plumbi Iodidi; Plumbi Oxidum; Emplastrum Plumbi.* Preparations of lead also occur in a number of additional officinal plasters.

PLUMBI CARBONAS, U.S.

A. Body spotted with petechiæ, Snow, **137**, 2/44, 144.

D. Eczema, **71**, 103.
Burns, **203**.

PLUMBI IODIDUM, U.S.

D. Chronic eczema, **4**, 205; Belcher, **125**, Aug. '67, 85.
Favus, Neligan, **125**, Aug. '48, 57.
Eczema scroti **209**.

PLUMBI OLEAS.

D. Eczema, rosacea, erythema, burns, Shoemaker, **196**, '79.

PLUMBI NITRAS, U.S.

D. Erysipelas (Firnat), **161**, '76, 434.
Is said to act most happily in *onychia maligna.* The dead part of the nail should be cut away, and the powdered nitrate thickly sprinkled over the surface; after a few days the slough separates, leaving a clean surface, upon which the new nail usually forms. Sometimes more than one application is required, **18**, 39.

PLUMBI SUBACETAS, U.S.

D. Eczema, **73**, 74; Squire, **146**, 1/76, 302, 329; **146**, 1/76, 464; **3**, 1: 128; **10**, 1: 216.
Erysipelas, erythema, herpes, etc. (*ib.*).
Burns of the first degree, herpes, pruriginous affections, **3**, 1: 128.
Kerion, **80**, 244.
The soluble lead salts are used in lotion to unhealthy and over-secreting and eczematous eruptions. When there is much inflammation, and when the surface is raw and weeps copiously, a lead lotion allays the inflammation and checks the discharge, and quells the itching, burning and tingling so often accompanying eczema. A lead lotion is often of great service in pruritus pudendi, **5**, 170.

PODOPHYLLUM (*Podophyllum peltatum, L.*), U.S.

B. Rubefacient and vesicant effects from the application of an alcoholic solution, Bently, **159**, '62, 462.

REMARKS.—The officinal preparations are: *Extractum Podophylli* and *Resina Podophylli.*

POLYGONUM HYDROPIPER, *L.*, U.S.D.

D. Detersive in atonic and scrofulous ulcers, **26**, 811.
Condylomata, **35**, 186.

POTASSA, U.S.

B. When applied to the skin, at first warmth, then sharp burning, lasting for three or four hours, and gradually disappearing. The skin is then found to be somewhat softened at the centre, and coriaceous at the circumference. The whole depth of the skin is involved. The eschar, at first soft and humid, soon dries, and separates in from one to four weeks. The slough may be four or five times the diameter of the piece of potash, **3**, 1: 305.
The scar is always larger than the place to which the potash was applied, **22**, 2: 337.

C. Chronic eczema, **66**, 80.
Furuncles, **98**, 38.

D. (Diluted.) In dry, scaly eruptions, pityriasis, psoriasis, and ichthyosis, **24**, 1: 272.
Lupus, **79**, 66: 206.
Lupus erythematosus, **92**, 2: 317.
Rodent ulcer, MacConnell, **145**, Sept. 21, '78.
Nævus pigmentosus, **206**.
Trichophytosis capitis, Purdon, **135**, 4: 295.
Acne indurata, callosities, **203**.

REMARKS.—The officinal preparations of Potassa and Potassium are: *Liquor Potassæ; Potassa cum Calce; Potassii Acetas; Potassii Carbonas; Potassii Bicarbonas; Potassii Bichromas; Potassii Bromidum; Potassii Iodidum; Potassii Tartras; Potassii Bitartras; Potassii et Sodii Tartras; Potassii Chloras; Potassii Citras; Potassii Ferrocyanidum; Potassii Nitras; Potassii Sulphas; Potassii Sulphuretum; Liquor Potassii Citratis; Mistura Potassii Citratis; Trochisci Potassii Chloratis.*

POTASSII ACETAS, U.S.

A. Diaphoretic, **7**, 131.

C. Eczema, psoriasis, Easton, **150**, May, '50, 423; **201**; **204**; **207**.
Rosacea, **201**.

POTASSII BICHROMAS, B.

A. Eliminated in part by the skin, and produces papular eruptions, which later assume a pustular character, **13**, 136.

B. The first effect of the habitual application of a solution is to produce an eruption of papulæ. These after a little time become pustular, and at length, provided the exposure be continued, deep sloughs of a peculiarly penetrating character form under the pustules. In dyers are found deep ulcers on the wrists and arms, Cumin, **127**, Oct. '27, 301.

Syphilis, Vicenti, **107**, 4: 111; Bonnéfoux.*

D. Saturated solution to tubercular excrescences and warts, Cumin, **127**, Oct. '27, 301.

Potassii binoxalas, P., U.S.D.

C. Scorbutus, Tayler, **116**, 1/78, 177.

Potassii Bromidum, U.S.

A. Excreted in part by the skin, **9**, 1120.

Bromine has been chemically detected in the pustules produced by bromide of potassium, Guttmann, **112**, 74: 541.

In large doses (300 grains a day), sensibility of the skin so much diminished that sticking, burning, and pinching are not perceived, **6**, 40.

Urticaria, **72**, 154.

Prurigo, Purdon, **135**, Oct. '67; Astesiano (La Liguria Medica, '71), **131**, 6: 63.

Coppery papules on forehead, Hameau (Jour. de méd. de Bord., mar. '68), **128**, '68, 269.

Acne on the face, forehead, and shoulders, **4**, 366.

Eruption like varicella, but the vesicles, instead of drying up, become in many places confluent, and the clusters thus formed showed a tendency to enlarge and exhibited numerous points of suppuration. Cholmeley, **116**, 2/69, 633.

Macules, papules, erythema, pustules, Duhring, **145**, Nov. 30, '78.

An eruption, generally acneform, occurring chiefly on the face and back, but it may affect even a larger surface. These spots do not generally suppurate nor leave scars. The acneform spots may become true boils, and these boils sometimes form large ulcers with conical scabs like rupia, **5**, 95.

There are five principal forms of eruption. The first of these is acneform. It appears shortly after the commencement of treatment (of epilepsy) when the doses of the drug are three or four grammes. The eruption commences by pustules. It appears by preference about the shoulders, forehead, and nose. First of all little pin-head pustules appear, each surrounded by a red areola. Later the pustule enlarges and acquires a hard, indurated base. In this condition it may persist for weeks. Afterwards the pus is discharged, but a small reddish nodule remains for a long time. The pustules vary in number, and are most plentiful when the dose is suddenly augmented. The second form of eruption appears on the lower extremities, rarely elsewhere. It consists of rounded or elongated elevations, 2 cm.—5 cm. in diameter, of rosy color, sometimes yellowish, as if due to pus beneath the epidermis. The surface is roughened by minute agminated pustules. In the rounded patches the centre is depressed. It is rare for the same patient to have more than two or three of these at a time. The elevations are painful and sensitive to the touch except the depressed centre, which is anæsthetic. Later a creamy fluid is discharged, which forms a thick crust. They sometimes ulcerate, and may coexist with the form first described.

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* Du bichromate de potasse comme antisyphilitique. Thèse, Paris, 1866.

The third form resembles erythema nodosa, and affects the skin of the upper and lower extremities and trunk, but spares the face. The appearance of the eruption is preceded by pruritus and pain in the affected limbs, which may become edematous.

The fourth form is furuncular and the fifth eczematous in character, Voisin, **178**, '68, 603.

Pustules on chin, cheeks, and forearms in a nursing child whose mother was taking bromide (Jour. de l'Acad. de Méd. de Turin), **163**, Sept. 10, '76.

In a child, after taking two hundred and fifty grains, an eruption appeared. On microscopical examination it was found that the sebaceous follicles were chiefly affected, exhibiting marked evidences of epithelial hyperplasia, Neumann, **177**, '73, No. 49.

Erythema, vesicles, scales, **205**.

The eruption had somewhat the appearance of a half-ripe raspberry. It was raised about one line or so above the level of the surrounding skin; the margins were abruptly defined and the adjoining skin perfectly healthy. It seemed to consist of hypertrophied papillæ, covered over with a thickened, reddened epidermis. It was not tender to the touch. There was hardly any appreciable exudation from the surface. It much resembled a mucous tubercle, except that its surface was dry, Parker, **172**, 12: '79, 200.

D. Eczema, Piffard, **143**, Oct. 26, '79.

Potassii Carbonas, U.S.

C. Psoriasis, pityriasis, acne, lichen, **7**, 107.
Eczema and psoriasis, **207**.

D. In weak solution as a lotion in the early and middle stages of acute eczema, when the red and raw surface weeps copiously, **5**, 113.
(Ointment.) Psoriasis, **60**, 483.

Potassii Chloras, U.S.

A. Excreted in part by the skin, **6**, 166; **9**, 245.

C. Pemphigus, **69**, 212.
Eczema, impetigo, etc., Hutchinson, **146**, 2/56, 191.

D. In ulcers of all sorts, and especially in scrofulous sores, **24**, **1**: 297.
Cancroid of the lips, Féréol, **117**, 97: 477.
Phagedenic ulcers, **17**, 600.
Relieves the pain of epithelioma, **202**.
Acne vulgaris, **203**.

Potassii Chromas, P., N.D.

D. As an irritant in torpid ulcers, and as a caustic in condylomata and other fungosities, **24**, 1: 304.

Potassii Cyanidum, U.S.

B. Excites severe burning pain when applied to the skin, and, if allowed to remain, will produce an eschar, **10**, 2: 29.

Lethal effects may follow prolonged contact with the skin, even when the epidermis is unbroken, **4**, 406.

D. Pruritus, urticaria, Anderson (*ib.*).

Potassii Iodidum, U.S.

A. Purpuric spots, O'Reilly, **153**, Jan. '54, 7; Abbe, **110**, 4: 131; **205**; (H.G.P.).

Petechial rash on legs, Ringer, **162**, Mar. '72, 129.

Vesicles, Hyde, **110**, 5: 333.

Vesico-pustular eruption with erythematous blush, Finny, **116**, 2/79, 291.

Papules becoming vesicular, Duckworth, **142**, 2/78, 432.

Papules and small pustules, Johnson, **116**, 1/59, 60; Flagg, **118**, '48.

Acne, **4**, 165; **203**.

Hard papules and vesicles, the fluid of which contained iodine, Duckworth, **172**, '79, 39.

Bullæ, O'Reilly, **153**, Jan. '54; Bumstead, **102**, July, '71; Hyde, **110**, 5: 33; **205**.

Erysipelas, Curgenven, **137**, 2/67, 88.

Erythema, scales, papules, pustules, **205**.

The loose tissues about the orbit become swollen, reddened, and edematous, and occasionally a peculiar rash appears upon the skin of the face, at first noticed around the eyes, after which it attacks the nose and the neighboring parts, and then the chin. The nose is sometimes reddened, especially at the tip, and is rather swollen. The rash does not always present the same appearance. It is often very much like acne, and is always hard and shotty, and indurated: but the papules may be broad and large, and covered with what looks like a half-developed vesicle or pustule.

In some persons the iodides produce a petechial rash, almost always affecting the leg exclusively, rarely extending above the knee, and still more rarely to the trunk and upper extremities. It may at first take several days to produce this rash, but when the spots have disappeared one dose of five grains may in three hours suffice to reproduce it, **5**, 76–7.

Eruption resembling hydroa. It is sudden and symmetrical, and prefers the face and forearms. Vesicles and small bullæ, from the size of a shot to that of a pea, or even to that of half a small cherry, and usually surrounded by an erythematous base, and sometimes inflammatory swelling of the skin. In the earliest stages the papules resemble those of small-pox. The vesications become larger, lifting up a very delicate layer of epidermis, which presents no central depression. Their contents become gray and opaque, but not distinctly purulent. Although there is no umbilicus, yet a peculiar appearance is sometimes assumed by the vesication spreading at its margin and sinking at its centre, the patch then becoming sometimes as large as a shilling. Hutchinson, **172**, '75, 152.

Microscopical appearances.

Bullæ.—The cutis under the bullæ presented three distinct areas of morbid change. The innermost area was composed of a structureless, almost homogeneous, but faintly granular substance, containing at several points rows of leucocytes; the middle area was composed of a layer of exudation cells suspended in a very delicate reticulum; the outer was formed by remnants of connective-tissue bundles separated from each other by wide spaces. There were a few blood-vessels in the second area, and a large number in the third. The vessels were distended by red corpuscles, and their walls were in many instances partially disorganized. The substance in the inner area consisted of coagulated albuminous material from the blood. The third area was bounded almost abruptly by the ordinary bundles of connective tissue of the cutis. The sebaceous glands were unaffected. Portions of blood-vessels in the deeper strata of the cutis, and distant from the bulla and from the sebaceous glands, were found distended and plugged with disorganized blood. The epidermis over the inner area was ruptured and disorganized. The bulla was formed by injury to the walls of the blood-vessels of a limited area, and by consequent escape of blood, which displaced the connective tissue, pierced the rete mucosum, and accumulated under the horny layer of the epidermis, Thin., **137**, 2/78, 696.

Pustules.—It was found that they principally implicated the superficial layer of the cutis vera. The papillary layer at the affected part was flattened out, stretched, and even excavated, and contained a large number of small cells, and a quantity of newly formed fibrous tissue (fibro-nuclear layer).

Blood-vessels were seen to be numerous in all the specimens, both in the neighborhood of the sweat-glands and also in other parts of the cutis vera; immediately beneath the pustule they were devoid of blood. The vessels passing into the depth of the corium in the centre of the pustule, and also those of the periphery, were seen to be ensheathed in streaks of exudation corpuscles. No evidence of the rupture of any blood-vessel was to be obtained.

The sweat-glands seemed entirely unaffected, even in close proximity to the pustules, although in several places the blood-vessels were found affected as before mentioned. In one or two sections the ducts were seen opening upon the surface of the skin, close to the affected part.

No evidence was afforded of the implication of any hair-follicles.

In both pustules examined there was a distinct separation of the inflamed tissue from the subjacent healthy structures.

The epithelium bounding the pustules was found to be in a perfectly healthy condition.

From the above, it is inferred that the pustules are not of the nature of acne, but are due to a superficial localized dermatitis, resulting in cicatricial tissue. In the present case, however, no evident cause of such localization (as, for example, rupture of blood-vessels) could be demonstrated, Duckworth and Harris, **195**, '79, 476.

C. Eczema, **73**, 75.
Psoriasis (Belcher, Arnould, Roux de Brignolle), **17**, 561; **81**, 22.
Lupus, Gay, **137**, 2/71, 814; **76**, 474; **117**, 85: 41.
Syphilis.

D. Lupus, **77**, 320.
Scabies, Spencer, 162, '69, 196.
Leprosy, **58**, 376; (H.G.P.).

POTASSII NITRAS, U.S.

A. Vesicles changing to pustules, Jörg, **42**, 5: 381.

C. Purpura, Carlyon (**164**, '48), **44**, 475.

POTASSII PERMANGANAS, U.S.

D. Ichorous and gangrenous ulcers, **24**, 1: 305.

POTASSII PICRAS.

A. Jaundice, **6**, 168.

POTASSII SILICAS, U.S.D.

D. As a protection in erysipelas, acute eczema, and excoriations, and to smother animal parasites that burrow under the skin (Pulex penetrans, etc.), **24**, 1: 300.

POTASSII SULPHAS, U.S.

B. In strong solution causes a burning sensation and local inflammation, **6**, 55.

POTASSII SULPHIDUM, U.S.

A. Excreted by the skin, **9**, 237.
Diaphoretic, **1**, 427.

B. Applied in strong solution to the skin it produces a superficial papular, or vesicular eruption, and facilitates the detachment and regeneration of the epidermis, **24**, 307.

C. Eczema, **81**, 51.
Psoriasis, Earnest, **141**, '07, 17: 315; **7**, 113.

D. Scabies, **1**, 427; **7**, 113; **4**, 159.
Psoriasis, **141**, '07, 17: 315; **7**, 113.
Pityriasis (*ib.*).
Eczema (Trousseau), **113**, '46, 118.
Acne, **68**, 244; **210**.

PRUNUS DOMESTICA, *L.*, F.; U.S.D.

C. Scorbutus, *dartres*, and other chronic affections of the skin, **48**, 5: 255.

PSORALEA CORYLIFOLIA, *L.*

C. Leprosy, Young, **162**, Nov. '78.

PULSATILLA (*Anemone Pulsatilla*, *L.*, *et al. spec.*), G.; U.S.D.

A. Offensive perspiration and pustular eruption, **1**, 380.

B. Irritation, **2**, 19; **24**, 2: 249.
Redness and vesicles, **23**, 3: 323; **19**, 1: 32.

C. Ill-conditioned ulcers and obstinate eruptions, **1**, 380.

D. Putrid wounds, ragged nails, papules, and warts, Tragus, **52**, 8.
Syphilitic ulcerations of long duration, **24**, 2: 250.

PYROLA ROTUNDIFOLIA, *L.*

C. Atonic ulcerations, **49**, 2: 429.

REMARKS.—Compare Chimaphila umbellata.

QUILLAIA SAPONARIA, Mol., U.S.D.

D. Pityriasis, eczema, seborrhœa sicca, and ulcers, Shoemaker;* (H.G.P.).
Pruritus, acne; (H.G.P.).

REMARKS.—In common with the *Saponaria officinalis*, this drug possesses an active principle named *Saponin*, which is irritant when applied in a concentrated state. It is also anæsthetic. Under the name of "Fluid Extract of Soap-bark," a preparation of the plant is found in the market. Mixed with a few drops of water and briskly rubbed, a lather like that of soap is formed. This we have employed for several years as a cleanser, detergent, and stimulant, and more especially in cases where the ordinary soaps did not agree well with the skin. Mingled with a little glycerine it forms an admirable application in some cases of acne. Mixed with coal-tar it constitutes the "Coal-tar saponiné Le Bœuf," a French proprietary preparation.

RANUNCULUS (*Ranunculus bulbosus*, *L.*), U.S.

B. This and most of the other ranunculaceæ are acrid and caustic. The caustic principle is of a singular nature; it is so volatile that in most cases it is destroyed by desiccation, infusion in water, and decoction, **25**, 105.

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* The Medical Bulletin, July, '79, 49.

Most of the species, when applied to the skin in a fresh state, act as vesicants; they are apt, however, to cause ulcerations difficult to heal, **28**, 4.
Excoriates the skin and may excite erysipelas, **51**, 6: 266.
The fresh root laid on the skin causes burning, followed by a vesicle, and later an ulcer, **23**, 3: 358.
May give rise to superficial gangrene, after having produced vesicles, **26**, 904.

RANUNCULUS ACRIS, *L.*, P.; U.S.D.

B. Vesicles and ulcers, **23**, 3: 361.

RANUNCULUS FLAMMULA, *L.*, P.; U.S.D.

B. Reddens and vesicates the skin, **23**, 3: 346.

D. Corns and warts (*ib.*).

RANUNCULUS SCELERATUS, *L.*, P.; U.S.D.

B. If it be bruised and laid upon any part of the body, it will in a few hours raise a blister, **27**, pt. II., 23.
The juice causes vesicles and obstinate ulcers, **23**, 3: 353.

D. Chronic ulcers, **31**, 93.

RHEUM (*Rheum palmatum*, *L.*, *et al. spec.*), U.S.

A. The coloring matter of rhubarb is sometimes found in the sweat, **1**, 156.

RHEUM HYBRIDUM, *Murr.*, U.S.D.

A. Diaphoretic, **36**, 4: 395.

RHINACANTHUS COMMUNIS, *Nees.*

D. Trichophytosis, **32**, 2: 361.

RHODODENDRON CHRYSANTHUM, *L.*, P.; U.S.D.

A. Diaphoresis, **24**, 2: 915; **30**, 1039.
Itching of the nose and eyes, and burning and pricking sensation in the skin, with formication, producing a special eruption, sometimes followed by excessive perspiration, **1**, 370.

RHUS TOXICODENDRON, *L.*, G., U.S.D.

A. Diaphoresis, Dufresnoy.*
Diaphoresis, itching, and burning, **43**, 385.
Itching, burning, and tingling, Kitzela, **1**, 374.
Painful sensations in the skin followed by sweat, **22**, 1: 107.

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* **Des Caractères, du traitement et de la cure des dartres . . . . par l'usage du rhus radicans, etc. Paris, An VII. de la République.**

B. "On the eighth day of July, 1795, I applied two or three drops of the milky juice whilst it issued from the common foot-stalk of the leaves of the Rhus Radicans, to the risband of my shirt. These leaves immediately before had been torn from the stalk of the plant by a friend of mine.* My object in applying the juice was to determine in what length of time it would assume the black hue. In a few minutes I found that the linen was stained black, and in a short time after this I observed that the juice had penetrated through the risband, and that it had communicated a dark brown or blackish color to that portion of the epidermis which was immediately under it. The day was unusually warm, and I went into the water to bathe. In the evening I felt a considerable itching of my wrist, and the following morning observed that there were upon it a number of extremely minute vesicles, which contained a fluid more or less limpid or transparent. The itching increased hourly; the wrist and the middle of the forearm began to swell, and the vesicles extended themselves rapidly, chiefly upwards towards the elbow, and partly downwards along the lower part of the wrist, and upon the finger.

"Meanwhile, vesicles accompanied with, and preceded by, itching more or less troublesome made their appearance upon various other parts of the body. The face was universally speckled with them. But these were extremely small, the fluid which they contained was always very limpid, and, without any application except that of cold water every morning, they entirely disappeared in two or three days.

"About the seventh or eighth day, the itching, the inflammation, and the spread of the vesicles appeared to be nearly at their height. At this period, and for some days afterwards, the greater part of the forearm, and about one-third of the arm, were swelled to nearly twice the natural thickness; the itching was intolerable, and the vesicles, in general, were no longer filled with a limpid fluid, but contained a thick matter, or pus, very similar to that of small-pox, and strongly adhering to the linen. On the ninth day, I perceived a swelling in the axillary gland of the right arm, which was that to which the lacteous juice was applied, and which was chiefly affected. The swelling rapidly increased until it became of the size of a hen's egg, and on the second day from its appearance it had almost entirely vanished.

"From the period that the swelling was at its height, to its entire disappearance, the itching was almost universal, and much more insupportable than it was before. I attributed this itching to the influence of the poison, which, I suppose, was conveyed into the system from the time that the axillary gland began to swell and inflame. Nevertheless, I could not discover that there was, in consequence of this supposed absorption of the poison, any increase of the number of vesicles upon the surface of the body.

"In fifteen days from the time that the poison was first applied to my arm, all the disagreeable symptoms had ceased; the vesicles had almost disappeared; a desquamation of the affected parts had taken place, and a new epidermis had been formed," **27**, p. II., 32.

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* "I was not myself within the sphere of action of the plant, which I was careful to avoid, well knowing, from long experience, its injurious effects upon me."

The smoke of the burning wood may produce eruption, **1**, 374.

The hand introduced into a vessel filled with the exhalations of the plant was affected with burning, inflammation, and swelling, Van Mons, **36**, 4: 406.

The emanations are most powerful at night, **3**, 1: 720.

Dr. Ed. K. Root has personally experienced relapses of the eruption from a single exposure (oral com.). I have witnessed one of these relapses on Dr. R. in the month of January, 1880; (H.G.P.).

C. Eczema, pityriasis, Dufresnoy, *op. cit.*; **86**, 2: 126.
Psoriasis, *Flechten*, **63**, 3: 153.
Zoster, pemphigus, eczema, erythema, erysipelas, **2**, 283.
Eczema, **208**; (H.G.P.).
Zoster, **208**.
Hydroa; (H.G.P.).
Vesicular affections, **204**.

Remarks.—The effects of the application of rhus to the skin are so graphically described by Dr. Barton, as observed during the last century, when the plant was comparatively new to science, that I have given his statement in full. Its first therapeutic applications of which we have accounts were made by Dufresnoy, professor of botany at Valenciennes. He was induced to employ it in cutaneous diseases in consequence of the following incident: One day, when lecturing at the botanical garden, a mischievous student said to a young florist who was present, that the professor's account of the noxious properties of rhus was incorrect, as the plant growing in France was perfectly innocent. To convince him of this, he plucked some leaves and rubbed them freely on his hands and wrists, as he knew by previous experience he could do with impunity. The florist, thus persuaded, imitated his example, but in a short time had occasion to regret his imprudence. The next day, finding himself in trouble, he consulted the student, who gravely assured him that he had undoubtedly caught the itch somewhere, and advised him to rub into the affected parts half an ounce of citrine ointment, and to purge himself freely with mercurial pills. This did not mend matters, and, finally, Dufresnoy was made acquainted with the state of affairs. In about ten days the young man recovered from the effects of the rhus, and, to his great surprise, found that a chronic eczema (*dartre*) of six years' standing, for which he had vainly sought relief, had disappeared at the same time.

The apparent cure of the chronic eruption in this case led Dufresnoy to experiment further with rhus in cutaneous and other affections.

One of the best known, and at the same time most remarkable of the peculiarities of rhus toxicodendron (or R. radicans, as it is sometimes called), is the fact that some persons appear to be insusceptible to its poisonous action when applied to the skin, while others are seriously affected by merely passing near and to the leeward of the plant, and without direct contact with it. This led Dufresnoy to inquire whether those who are not affected by its external application are also insusceptible to its therapeutic effects when administered internally. Most writers have assumed that such was the case; but this, I believe, is an error, as I can personally handle both the rhus toxicodendron and the rhus venenata with perfect freedom, and yet am susceptible to the effects of quite small quantities taken internally.*

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* See Phillips' Materia Medica Am. ed., 1879, page 131.

Dr. Barton relates the singular instance of a physician of his acquaintance who could *chew* the plant with indifference, but in whom a small quantity would produce local inflammation when applied to the skin.

I have used rhus to advantage in several cases of acute eczema internally, and in an anomalous relapsing vesicular affection that might be classed as a case of herpes hydroa. I have not employed it externally. Though only semi-officinal in the U. S. Ph. (Fifth dec. revis.), it is found in the German and French Pharmacopœias, and was contained in the U. S. Pharm. of 1830. The tincture from the fresh plant is the only reliable preparation, that of the German Pharmacopœia being made from five parts of fresh leaves to six parts of alcohol. The tincture which I have personally employed is made from one part of fresh leaf to two parts of alcohol. Although the active principle of rhus toxicodendron is exceedingly volatile, if the tincture be mixed with either cane or milk-sugar its properties are retained on drying. Owing to the different susceptibilities of individuals to the effects of rhus, no definite dose can be formulated. It is more prudent to commence with an exceedingly small dose and increase it, if necessary. It is a drug that should be administered with extreme circumspection, but when properly employed is of great value.

RHUS VENENATA, *D. C.*, P.; N.D.

B. Pruritus, tumefaction, vesicles, pustules, crusts, **45,** 1: 106.
Erythema, vesicles, etc.; (H.G.P.).

D. Hemorrhoids, **20,** 102.
Eczema; (H.G.P.).

REMARKS.—The effects of rhus venenata or swamp sumach closely resemble those of rhus toxicodendron, except that the former is generally believed to be the more potent. My clinical experience is confined to a tincture prepared by Dr. Wm. Manlius Smith, of Syracuse, in 1847. This tincture is still active, as only last year a few drops applied to the arm of a medical friend excited an active dermatitis. Applied to my own skin it produces no effect. I have used this tincture externally in eczema in the following manner: the patient is furnished with the tincture diluted with five or ten parts of alcohol, and directed to add a few drops to a wineglassful of water, and apply the lotion to the affected part. If no beneficial effect, nor undue reaction is experienced, he is directed to increase the proportion of the drug at the next application, and so on, until an effect is produced. I have used it thus far only in chronic and pruriginous eczematous patches, accompanied with very slight infiltration. In these it has acted admirably. It may be stated incidentally that the Rhus *diversiloba* of the Pacific coast is said to be even more active than our eastern varieties. The Rhus *glabrum*, on the other hand, does not appear to possess the peculiar venomous qualities of the other species. I do not think it wise to order Rhus tox. or Rhus ven. in prescription, but invariably dispense it myself. Those who see fit to do otherwise may be reminded that the genitive of Rhus is Rhoïs or Roris (Gerrish*).

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* Prescription Writing. Portland, 1878, p. 47.

RIBES RUBRUM, *L.*, F.

C. *Dartres*, prurigo, and other chronic affections, accompanied with general irritation, **48**, 4: 81.

ROSMARINUS (*Rosmarinus officinalis*, *L.*), U.S.

A. Specially affects the skin and causes pruritus, macules, and a pustular eruption, Richter, **1**, 369.

C. Obstinate eruptions, psoriasis, elephantiasis, etc. (*ib.*).

D. Alopecia, **44**, 511.

REMARKS.—The only officinal preparation is *Oleum Rosmarini.* The B. Ph. contains a *Spiritus Rosmarini*, which consists of one part of the oil to forty-nine parts of alcohol.

RUBUS VILLOSUS, *Ait.*, U.S.

D. (Decoction of the leaves.) *Dartres*, **51**, 6: 308.

RUMEX ACETOSA, *L.*, F.; U.S.D.

C. Purpura hemorrhagica, **26**, 728.

RUMEX ACUTUS, *W.*

C. *Scabies*, ulcers, **20**, 114.

RUTA (*Ruta graveolens*, *L.*), U.S.

B. Pruritus, **36**, 4: 425.
Pruritus, redness, vesicles, desquamation, Soubeiran, **128**, '61, 720.

REMARKS.—The only officinal preparation is: *Oleum Rutæ.*

RUTA MURIARIA, *C.B.P.*

D. Makes the hair grow, Shroder, **52**, 6.

SABADILLA (*Veratrum Sabadilla*, *Retz*), U.S.

A. Pricking and itching of the skin, sometimes pustular eruption, **1**, 185.

D. (Seeds.) Phthiriasis capitis, **63**, 3: 171.

Veratria, U.S.

A. In large doses, copious sweat, and pale, cool skin, **2**, 534.
Lessens irritability of the cutaneous nerves, **43**, 507.

B. In concentrated form causes heat, erythema, and even pustular eruption, **2**, 533; 210.

D. Chromophytosis, **43**, 527.

Remarks.—The officinal preparations are: *Veratria* and *Unguentum Veratriæ.*

Sabina (*Juniperus Sabina, L.*), U.S.

A. Warmth and diaphoresis, **32**, 2: 436.
The odor of savin is exhaled by the skin, **10**, 1: 413.

B. The twigs cause inflammation of the skin, **43**, 367.

C. Eczema capitis of infants, **51**, 7: 4.

D. Eczema capitis of infants (*ib.*).
Venereal warts, **6**, 496; **13**, 150; **17**, 389; **206**.

Remarks.—The officinal preparations are: *Oleum Sabinæ; Extractum Sabinæ Fluidum; Ceratum Sabinæ.*

Salvia (*Salvia officinalis, L.*), U.S.

A. Diaphoresis, **6**, 337; **3**, 2: 448; **10**, 1: 621; **9**, 526.

C. Hyperidrosis, **1**, 459; **6**, 338; **10**, 1: 622; **32**, 1: 517; (Vignard), **135**, 3: 318.

D. Atonic and scrofulous ulcers, **3**, 2: 448.

Remarks.—The only officinal preparation is *Infusum Salviæ.*

Sambucus nigra, *Willd*, F.; U.S.D.

A. Diaphoretic, **9**, 1170; **32**, 1: 643; **36**, 5: 12.

Sambucus Canadensis, *L.*, U.S.D.

D. (Infusion of the flowers.) Erysipelas, **207**.

Sanguinaria (*Sanguinaria Canadensis, L.*), U.S.

B. The juice is irritant and may produce eschars on the skin, and especially on mucous membranes to which it is applied, **19**, 1: 130.
The powdered root is escharotic, **50**, 228.

C. Secondary and tertiary syphilis, **2**, 147.

D. Exuberant granulations, Smith, **45**, 1: 80.
(Juice.) Dermatophytic affections, **24**, 2: 265.
(Juice.) Verrucæ, **31**, 86.
Rhus poisoning, **207**.

Remarks.—The officinal preparations are: *Tinctura Sanguinariæ;* and *Acetum Sanguinariæ.*

SANTONINUM (*Artemisia pauciflora, Weber*), U.S.

A. Urticarial eruption, Sieveking, **116**, 1/71, 166.

REMARKS.—The only officinal preparation is: *Trochisci Santonini.*

SAPONARIA OFFICINALIS, *L.*, F.; U.S.D.

C. Furfuraceous and squamous affections, Alibert, **48**, 6: 94.
Cutaneous diseases, **28**, 13.
Chronic eruptions, **54**, 2: 501.
"I once saw a case of herpetic eruption cured by the use of this article, after it had resisted almost every other treatment recommended in such cases," **21**, 2: 189.

D. "*Abstergit scabiem et omnes cutis fœtidates,*" **52**, 59.

Saponin.

B. Anæsthesia, Keppler, **114**, '78, 475.

SARSAPARILLA (*Smilax officinalis, H.B.K.*), U.S.

A. Diaphoretic, **30**, 1033.

C. Scaly eruptions and ulcers, **1**, 218.
Its advantageous effects are well demonstrated in sordid and eroding ulcers, and in certain cutaneous affections resembling those which the ancients called *lupus* and *noli me tangere*, **22**, 2: 172.
Its employment is not confined to cutaneous affections of one particular elementary form, since it is given with good effect in papular, vesicular, pustular, and tubercular skin diseases of a chronic kind when they occur in enfeebled and emaciated constitutions, **7**, 367.
Its efficacy is well established, and its mode of action, though obscure, is generally attributed to a purifying influence on the blood, through the function of the skin, **11**, 271.
(In very large doses.) Syphilis, Albutt, **162**, May, '70, 257; Da Cunha, **162**, Sept. '70, 190.
"It will commonly relieve, in a very short space of time, venereal headaches and nocturnal pains; and, if persisted in, I believe, will always cure.
"In emaciated or consumptive habits from a venereal cause, it is the greatest restorer of appetite, flesh, color, strength and vigor that I know of.
"When the throat, nose, palate, or the spongy bones in general, are affected with a slough or *caries*, it will commonly complete the cure, if persevered in long enough, provided a mercurial course, I mean by unction, has preceded the use of *sarsaparilla.*
"When the body is covered with dry blotches or moist sores (still supposing the cause venereal), it will greatly promote the cure—nay, often complete it; but, without the assistance of me there will be danger of relapse.

"In simple chancres it will do little service; but if it is given in cases where the *chancres* and buboes will not heal or dissolve after the use of mercurial unction, it will often cure, and always do manifest service.

"It would seem probable, from any observations I have yet been able to make, that the *sarsaparilla* is only to be depended on in venereal cases where mercury has failed; at least, has preceded the use of the decoction, or when it is combined with it, and then is not to be trusted alone, unless in such circumstances.

"And this is agreeable to the well-known effects of that medicine, the reputation of which, in inveterate venereal cases, first put me in making this inquiry." Fordyce.*

SASSAFRAS (*Sassafras officinale, Nees*), U.S.

A. Diaphoretic, **32**, 1: 676.

C. Chronic eruptions, **1**, 221; **9**, 850.

REMARKS.—The officinal preparations are: *Oleum Sassafras* and *Mucilago Sassafras Medullæ.*

SCABIOSA SUCCISA, *L.*, F.; U.S.D.

C. Eczema, fissures, and other eruptions, **53**, 557.

D. Pruritus, impetigines, pityriasis, fistulous ulcers, **52**, 37.
Eczema capitis, **51**, 7: 102.
Itching vesicular eruptions, **53**, 558.

SCANDIX CEREFOLIUM, *L.*, F.; U.S.D.

D. Herpes manuum, **34**, 1: 281.

SCILLA (*Scilla maritima, L.*), U.S.

A. In many persons diaphoretic, **1**, 267.
Purpuric eruption in a case of fatal poisoning, Thompson, **137**, Sept. 9, '37.

B. Redness, inflammation, and vesicles, **32**, 2: 128; **17**, 518; **43**, 363.

REMARKS.—The officinal preparations are: *Acetum Scillæ; Tinctura Scillæ; Syrupus Scillæ; Syrupus Scillæ Compositus; Extractum Scillæ Fluidum; Pilulæ Scillæ Compositæ.*

SCORDIUM (*Teucrium Scordium, L.*), F.; U.S.D.

A. Diaphoretic.

D. In powder to foul ulcers, **23**, 3: 390.

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* Medical Observations and Inquiries. Vol. I., pp. 169-171. London. 1758.

SCROFULARIA NODOSA, *L.*, F.; U.S.D.

C. Serpiginous ulcers, **52**, 65.

D. Pemphigus gangrenosus, Stokes, **141**, '08, 19: 344.

SEDUM ACRE, *L.*, F.; U.S.D.

B. Slight burning and redness, **36**, 5: 32.

D. Several authors (Hévin, Lombard, Roques, Tarbès, Brimoa, Royer) report cures of lupoid and cancerous ulcers, **26**, 541.
The fresh leaves and freshly-expressed juice in torpid and cancerous ulcers, **24**, 2: 916.

SEMPERVIVUM TECTORUM, *L.*, F.; U.S.D.

D. The juice, pure or mixed with oil, applied to burns of the first or second degree, calms the pain and prevents the formation of blisters, **26**, 537.
Dartres, fissures, deep ulcers, Boyer, **49**, 1: 421.

SENEGA (*Polygala Senega, L.*), U.S.

A. Diaphoretic, **7**, 799; **45**, 2: 99.

REMARKS.—The officinal preparations are: *Extractum Senegæ; Extractum Senegæ Fluidum; Decoctum Senegæ;* and *Syrupus Senegæ.*

SERPENTARIA (*Aristolochia Serpentaria, L.*), U.S.

A. Diaphoretic, **7**, 448.

REMARKS.—The officinal preparations are: *Extractum Serpentariæ Fluidum; Tinctura Serpentariæ;* and *Decoctum Serpentariæ.*

SILICA, P.

C. Relieves the pains of cancer, Battye, **126**, Nov. '74, 420.
Lupus; (H.G.P.).

D. (Fine sand rubbed on the skin.) Ephelis, chromophytosis, acne rosacea, and chronic eczema, Ellinger, **177**, '76, No. 45.

REMARKS.—Battye employed finely pulverized silica in one-grain doses. I have used triturations of this substance, and have twice seen small lupous ulcerations heal during its use.

SILICA HYDRATA.

D. Chancroids, buboes, and other suppurating surfaces; (H.G.P.).

REMARKS.—A careful trial of this substance in my venereal wards Charity Hospital has satisfied me that it exerts a decided profuse suppuration. The bubo or other lesion under tre

be thoroughly packed with the silica, and the dressing renewed once or twice a day. As soon as healthy action is established its use should be discontinued. The method of its preparation is given in the Formulary.

SINAPIS (*Sinapis alba et nigra, L.*), U.S.

B. After four or five minutes, prickling, later burning, and at last a sensation like that of a hot iron upon the parts. In twenty or twenty-five minutes the pain increases so much as to be scarcely bearable. On removal of the mustard the access of air to the part increases the pain still more. Redness accompanies the pain. The pain may last for several days, but the redness lasts longer, and every evening is accompanied with a not unpleasant pruritus. If the application be very prolonged, or repeated, vesicles form, which on disappearing leave indelible macules, **17**, 295.
Pain, pustules, and finally erysipelatous inflammation, **1**, 410.

REMARKS.—The only officinal preparation is *Charta Sinapis.*

SISYMBRIUM NASTURTIUM, *L.*, U.S.D.

C. Eczema of infants, **51**, 3: 104.
Obstinate *dartres*, **49**, 1: 213.

SODII BICARBONAS, U.S.

D. Eczema, Lush, **116**, 2/79, 814.

SODII BORAS, U.S.

D. Chloasma, ephelis, **6**, 187; **24**, 1: 235.
Chromophytosis (Richter), trichophytosis (Christison, Pereira), **17**, 460.
Acne, **24**, 1: 235.
Pityriasis, **4**, 142.
Intertrigo and pruritus ani, **209**.

The officinal preparations are: *Mel Sodii Boratis* and *Glyceritum Sodii Boratis.*

SODII CARBONAS, U.S.

D. Eczema (in baths); (H.G.P.).
Urticaria, **207**.

SODII ETHYLAS.

D. Nævus, Brunton, **137**, 2/78, 625; **205**.

SODII HYPOSULPHIS, U.S.

D. Rhus eruption, Brandt, **143**, July 12, '79, 46.
Chromophytosis, Hardaway, **168**, July, '79, 19; **204**; **207**; **208**.
Trichophytosis genito-cruralis, **208**.

SODII SALICYLAS, P.; N.D.

A. Severe pruritus, redness, and urticarial eruption (Heinlein), **133,** 1/79, 409.
Lichenoid eruption, C.S., **115,** Jan. 1, '80, 22.

C. Urticaria, Pietrzycki (Med.-chir. Rundsch.), **143,** Feb. 28, '79, 232; **205.**

D. Alopecia areata, Eichorst, **112,** 78: 208.
Trichophytosis genito-cruralis, **208.**

SODII SANTONAS, G.

A. Pruritus and vesicular eruption, Hubert, **89,** 51.

SODII SILICAS, U.S.D.

C. Eczema, Gigot-Suard; * (H.G.P.).
Relieves the pains of carcinoma, **202.**

SODII SULPHIS, U.S.

D. (Lotion, 1—8.) Chromophytosis, Gull, **137,** 1/66, 6.

SOLANIN (*Solanum Dulcamara, L. et al., spec.*), U.S.D.

A. Hyperæsthesia and pruritus (**43,** 4th ed.), **42,** 9: 55.

SOLANUM NIGRUM, *L.*, F.; U.S.D.

A. Blotches like scarlatina over the whole cutaneous surface (**43,** 4th Ed.), **42,** 9: 63.

C. "While practising in the country I very frequently exhibited this species of solanum in obstinate herpetic eruptions and foul and painful ulcers, and often with most decided benefit," **21,** 2: 68.

D. (The juice.) Cancerous ulcers, **23,** 1: 276.

SOLIDAGO ODORA, *Ait.*, U.S.

A. Diaphoretic, **45,** 1: 190.

SPILANTHUS OLERACEA, *L.*, F.; N.D.

C. Scorbutus, Rousseau, Morand, **49,** 2: 400-1.

STACHYS RECTA, *L.*

D. Erysipelas, Clusius, **51,** 3: 99.

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* L'Herpétisme, etc. Paris, 1870.

STILLINGIA (*Stillingia sylvatica, L.*), U.S.

B. Smarting and irritation, Frost, **171**, 1: 617.

C. Pustular and herpetic eruptions (*ib.*).
Obstinate cutaneous affections, **7**, 447.
Numerous skin diseases, Cornell, **115**, 57: 40.
Syphilis, **206**.

REMARKS.—The only officinal preparation is the *Extractum Stillingiæ Fluidum*.

STRAMONIUM (*Datura Stramonium, L.*), U.S.

A. Burning heat and redness, with an itching eruption over the whole body, De Witt, **144**, 1798, 2: 30.
Face scarlet red; on face, neck, and breast hundreds of small, brilliant petechiæ, many of which had a stellate form, Meigs, **156**, '27, 33.
Hot, perspiring, flushed skin, **138**, 15: 194; Elliot, **153**, Nov. '56, 358.
Scarlet eruption, Calkins, **115**, '56, 54: 398; Buckingham, **115**, 65: 261; Lee, **102**, '62, 54; Wible, **166**, Aug. '73, 186.
Erysipelatous redness over the whole body; three days later, an eruption resembling rubeola, but more prominent, lasting twelve hours, Griffith, **102**, '29, 251.
Diaphoresis, **7**, 103; Voght, **24**, 2: 103; Ireland.*
Pruritus, **26**, 1026; **48**, 6: 181.
Causes eruptions on the skin, **22**, 1: 87.
Daturine produces erythema, sometimes scarlatinoid redness, **43**, 507.

D. Gangrenous, phagedenic, and sloughing ulcers. Cutaneous affections of all descriptions are mitigated and frequently cured altogether, by a constant ablution with the tepid decoction twice a day, Ireland.*
Contused leaves in chronic ulcers, **31**, 24.
Promotes the cure of certain cutaneous eruptions, **45**, 1: 28.
Erythema that sometimes follows vaccination, **203**.
Pruritus, Piffard, **143**, Oct. 26, '78.

REMARKS.—The officinal preparations are: *Extractum Stramonii Foliorum; Extractum Stramonii Seminis; Tinctura Stramonii; Unguentum Stramonii.*

STYRAX LIQUIDUS (*Liquidamber orientalis, Miller*), U.S.

D. Scabies, **6**, 565; **202**.

REMARKS.—Unna publishes the results of a methodical examination of the urine of 124 patients with scabies, in the Hamburg Hospital, during their treatment. The treatment consists of the inunction of an ointment of styrax three times in thirty-six hours, the patient in the meanwhile remaining in bed wrapped in woollen blankets. The examination was made on the first and third mornings, and in nine of the cases a considerable quantity of albumen, which, however, rapidly disappeared, was discovered in the urine. This in Unna's opinion is to be accounted for by the absorption of the balsam into the circulation, and its consequent passage through the kidneys (**112**) **115**, June 12, '79.

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* Remarks on the medical properties of the stramonium, etc. New York, 1817.

SULPHUR, U.S.

A. Excretion of sulphuretted hydrogen, **22**, 1: 436; **32**, 2: 556.
The same in animals, Hertwich, **36**, 5: 277.
Diaphoresis, **6**, 265; **51**, 7: 187.
Eczematous eruption, **66**, 77.

B. Papules, confluent and painful vesicles, **3**, 2: 626.
Red, dry, dirty aspect of the skin, with an attempt at the formation of vesicles, T. Fox, **137** 1/67, 455.
(Fumigations.) Redness, diaphoresis, papular eruptions, Wallace.*
The immediate effects experienced from fumigation is a sense of prickling heat in the skin, which is soon followed by profuse perspiration, **21**, 2: 190.

C. Furuncles, psoriasis, impetigo, eczema, etc., **13**, 153.

D. Scabies.
Acne, **97**, 1: 601; **9**, 24; **207**; (infusion of sulphur), **57**, 266.
Rosacea.
Lentigines, **64**, 15.
Pityriasis, **81**, 26.

REMARKS.—The officinal preparations are: *Sulphur Sublimatum; Sulphur Lotum; Sulphur Præcipitatum;* and *Unguentum Sulphuris.*

SULPHURIS IODIDUM, U.S.

C. Eczema, **60**, 253.
Cutaneous diseases, Escolar (clin. de Montpel.), **187**, '47, 16: 354.
Acne; (H.G.P.).

D. Scrofulous eczema, lupus, sycosis, and lepra, **24**, 2: 991.
Acne, psoriasis, **58**, 262, 328.
Rosacea, Ringer, **137**, 1/74, 265.
Favus, Donovan, **142**, 2/68, 69.
Acne indurata, **5**, 67; (H.G.P.).
Bromic acne, **5**, 67.

REMARKS.—The only officinal preparation is *Unguentum Sulphuris Iodidi.*

SYMPHITUM OFFICINALE, *L.*, F.; U.S.D.

D. In fissures of the nipple, calms the pain and promotes prompt cicatrization, **26**, 347.

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* **Observations on sulphurous fumigations. Dublin, 1820, pp. 80–82.**

TARAXACUM (*Taraxacum officinale, Wiggers*), U.S.

A. Itching and tingling, erythema, papules and wheals, followed by desquamation, Smyth, **137**, 2/45, 506.

C. Acne, **62**, 219.
Chronic eruptions, **1**, 515.

REMARKS.—The officinal preparations of dandelion are: *Extractum Taraxaci; Extractum Taraxaci Fluidum; Succus Taraxaci; Infusum Taraxaci.*

TAXUS BACCATA, *L.*, P.; U.S.D.

A. Petechiæ, Selle, **36**, 5: 321.
Bromidrosis and pruritus, Harmand, **36**, 5: 323.

B. Miliary eruption from sleeping under a tree, Harmand, **36**, 5: 322.

TEREBINTHINA (*Pinus palustris, Miller*), U.S.

A. Excreted in part by the skin, **2**, 196; **7**, 387.

B. Irritates, congests, and increases the sensitiveness of the skin, provokes diaphoresis by stimulating the capillary vessels and sudoriparous glands, **24**, 1: 668.
Redness, heat, and vesicular eruption, **2**, 196; **13**, 160.

C. Purpura, **4**, 461; **73**, 234.

D. Traumatic erysipelas, eczema, pernio, **17**, 368.
Ulcers, **1**, 297.
Alopecia areata, Duckworth, **167**, 8: 166; Thomson, **44**, 592.
Trichophytosis corporis, frost-bite, **203**.

REMARKS.—The officinal preparations are: *Oleum Terebinthinæ* and *Linimentum Terebinthinæ.*

TEUCRIUM CHAMÆDRYS, *L.*, F.; U.S.D.

A. Diaphoretic, **23**, 3: 392.

D. Much used and highly prized as a detergent for ulcers and wounds, (*ib.*).

THAPSIA GARGANICA, *L.*, F.; U.S.D.

B. Irritates, warms, reddens the skin, and causes pruritus, miliary vesicles and pustules, Martin, **117**, '68, 75: 171.
The application of a thapsia plaster to the chest is sometimes followed by a vesiculo-pustular eruption on the face. The eruption is accompanied with redness and swelling, and may be mistaken

for an erysipelas. It is probably caused by mechanical transfer of irritant particles from the site of original application, Tournadre.[*] Secondary eruption on the face from application of the plaster elsewhere, **206**.

THEVETIA NEREIFOLIA, *Juss.*

A. Diaphoretic, **24**, 2: 275.

THUJA (*Thuja occidentalis*, *L.*), P.; U.S.D.

A. Diaphoretic, **23**, 5: 124.

B. Irritates the skin and inflames it—acts like savin,[†] **24**, 2: 938.

C. Venereal warts, **2**, 205; Menier[‡]; (H.G.P.).
Epithelioma, Leaming, **153**, May, '55, 406; Rice, **149**, Dec. 10, '78.

C. and **D.** Warts on the face, **205**.

D. Venereal warts, **2**, 205, **202**; **204**; (H.G.P.).
The tincture applied from time to time for several days causes the excrescences to become pale, diminish in size, and disappear, Brecher, **26**, 1066.
Bromidrosis, Hoppe (Berl. med. Zeit., '59, 52), **146**, 1/60, 323.

REMARKS.—Fluid extracts and tinctures of Arbor vitæ should invariably be made from the *fresh* leaves. The dose varies from a few drops to a drachm. For external application it should be diluted with four or five volumes of water.

TONG PANG CHONG (*Akebia quinata* [?], *Decaisne*).

D. Eczema, Murray, **116**, May 19, '77; Crocker, **116**, 1/78, 225.
Psoriasis (*ib.*).
Trichophytosis, Murray (*loc. cit.*).

THYMOL (*Thymus vulgaris*, *L.*), U.S.D.

B. Irritant and caustic, Crocker, **116**, 1/78, 225.

D. Eczema, psoriasis (*ib.*).

TRIFOLIUM FIBRINEUM (*Menyanthes trifoliata*, *L.*), F.; U.S.D.

C. Scorbutus, scaly eruptions, and eczema, **1**, 509.

D. Ulcers, **32**, 1: 231.

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[*] Des éruptions à la face, consécutives à l'application des emplatres de thapsia sur le devant de la poitrine. Thèse de Paris, 1879

[†] This is not its usual action. I have seen it occur twice in the same subject, but with these exceptions no irritation has been produced in the many cases in which I have employed it.—H.G.P.

[‡] De la cure des végétations par l'usage à l'intérieur de la teinture de Thuya occidentalis. Thèse de Paris, 1879.

Trifolium pratense, *L.*

D. Pityriasis capitis, **35**, 21.

Triticum repens, *L.*, F.; U.S.D.

C. Herpetic and squamous eruptions, **54**, 1: 689.

D. Ulcers, **51**, 3: 8.

Tussilago Farfara, *L.*, F.; U.S.D.

C. Scrofulous ulcerations, Bodard, **49**, 2; 345.

D. Eczema and ephelis, **35**, 171.

Ulmus Campestris, *L.*

C. Psoriasis (Sigmond) **137**, May 20, '37; **2**, 541.

Urtica (*Urtica dioica, et urens, L.*), F.; U.S.D.

A. Burning sensation in face, pruritus, swelling, and later vesicles. Fiard, **36**, 5: 353.

B. Large, flat, white, and irregular papules, with severe burning pain. The lesions persist for a few moments only. A second application will renew them, but less promptly. After several applications the skin becomes insensible to their effects, **3**, 1: 397.
Pustular eruption, **49**, 3: 408.

C. Eczema, psoriasis, lichen agrius. Bullar, **116**, 2/54, 1010.

D. Pruritus, **35**, 111; (H.G.P.)
Eczema, **35**, 93.
Gangrenous ulcers, **52**, 127.
Prompt relief of burns by applying to affected parts lint moistened with tincture of urtica. Lukomski (Jour. de chim. méd., '58, p. 304), **26**, 727.

Remarks.—The properties of the two varieties of nettle are usually considered identical; and as the authors quoted have usually not distinguished between them, I have been obliged to arrange the citations under the general head *Urtica*. The irritant properties of the plant have been ascribed to formic acid.

Ustilago Maidis, *Lev.*, P.; U.S.D.

A. Its use is attended with the shedding of the hair, both in man and beast, and (sometimes) even of the teeth. Mules fed on it lose their hoofs. Roulin.[*]

C. Ichthyosis. Lombroso, **180**, Oct. '78, 306.

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[*] Tully W. Materia Medica and Pharmacology. Vol. I., Part II., Springfield, 1858, p. 1355.

VALERIANA (*Valeriana officinalis, L.*), U.S.

A. Formication of the hands and feet, **17**, 423.

REMARKS.—The officinal preparations are: *Oleum Valerianæ; Extractum Valerianæ; Extractum Valerianæ Fluidum; Tinctura Valerianæ; Tinctura Valerianæ Ammoniata; Infusum Valerianæ; Acidum Valerianicum.*

VERATRUM ALBUM, *L.*, U. S.

A. Eliminated in part by the skin, **13**, 162.

B. Inflammation and vesicles, **23**, 5: 290.

D. Phyto-parasiticide, **9**, 911; **24**, 2: 216: Spengles (Bul. de thér., 42: 43), **26**, 411.
"*Taches hépatiques*" (Lilienfeld), **117**, Jan. 30, '50, 87.
Freckles, **207**.

VERATRUM VIRIDE (*Veratrum viride, Ait.*), U.S.

A. Cold sweat, with general feeling of coldness, swelling, and eruption on the skin, **1**, 182.

D. Scabies (*ib.*).

Veratroidia.

D. Chloasma, Peugnet, **104**, 3: 210.
Erythema and erysipelas, **206**.

REMARKS.—The officinal preparations are: *Extractum Veratri Viridis Fluidum* and *Tinctura Veratri Viridis.*

VERBENA OFFICINALIS, *L.*, F.

D. Alopecia, **51**, 8: 35.

VIOLA TRICOLOR, L., F.; U.S.D.

A. Diaphoretic, **30**, 1003; **32**, 2: 175; **36**, 5: 444.

C. Eczema capitis infantum.
Specific against crusta lactea, Dillenius.*
The most useful, and in fact the specific remedy, is the Viola tricolor, Haase.†
Specially useful in milk-crust of children, in which it is specific, **23**, 1: 308.
Largely employed as an anti-scrofulous remedy in children, and specially in crusta lactea and other forms of eczema and impetigo in infants, **24**, 2: 890.

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* Diss. inaug. de Lichene pyxidato. Neoguntiæ, 1785, p. 32.

† Ueber die Erkenntniss und Cur der chronischen Krankheiten. Wien, 1820, B. III., p. 307.

A “precious plant” in eczema, **49**, 1: 390.

In *crusta lactea* this justly prized remedy is suited only to very weakly children; in the robust it not infrequently increases the eruption, **62**, 171.

The following authors further testify to its value in eczema capitis: **54**, 2: 699; **65**, 195; **63**, 3: 179; **67**, part I., 77; **203**.

One of the most powerful depuratives in the Materia Medica, **3**, (9th Ed., Vol. I., p. 849).

The wild pansy is slightly diuretic, diaphoretic, and laxative, and is regarded as depurative. . . . Strack gave the powder in doses of two grammes in milk or in decoction, morning and night. . . . At the end of four days the face becomes covered with thick crusts, which, however, should not prevent the continuance of the remedy, even after their fall, which usually occurs after the second or third week, as a thirty years' experience has taught him. This author has remarked, as I have myself several times observed, that the urine possesses, during the use of this plant, a fetid odor resembling that of cat's urine. Later, Haase, Metzer, Plouquet, Armstrong, Hahnemann, Thilenius, and nearly all the authors who have interested themselves in cutaneous diseases, have employed the wild pansy in *dartres* and other cutaneous diseases. Murray speaks in its favor, and Hufeland recommends that a strong decoction be employed for a considerable time. Schlegel carried his confidence in the wild pansy even to believing it useful in syphilis, and Brodart has proposed to substitute it for sarsaparilla. I daily employ wild pansy in milk-crust, and have observed decided amelioration of the disease when infants have used it for fifteen or twenty days. I macerate 4—8 grammes in 250 grammes of warm water during the night. It is then boiled and diluted with a quarter volume of sweetened milk, and is given fasting. **26**, 808.

Highly useful in cutaneous affections, **51**, 8: 78; **28**, 12; **16**, 17: 515.

The fresh plant or its juice is to be used, as drying destroys its active qualities, Griffith.*

The dry plant should not be employed if it can be avoided. If dried, the desiccation should be effected by artificial heat and rapidly, otherwise fructification will occur. Plants that have become yellowish or have gone to seed should be rejected. Héraud.†

D. Eczema, Schöman; ‡ **62**, 171; Piffard, **143**, Oct. 26, '78.

Remarks.—The first to bring the wild pansy (*Herba Jaceæ* of the older pharmacy) into notice as a remedy of special value in eczema capitis was Strack, who in 1772 published a monograph entitled, “*De crusta lactea infantum, ejusdemque specifico remedio dissertatio,*” etc. A few years later, Dillenius gives it rank as a specific in this affection, as he does mercury and cinchona in other spheres; he writes as follows: “*In plurimis aliis morbis a miasmate ortis habentur specifica, uti contra miasma febris intermittentis cortex peruvianus, contra crustæ lacteæ miasma jacea, contra syphilitidem mercurius.*” Still later its use became almost universal in Germany and France. In the latter country, and in Italy, it is still much employed and well thought of. In Germany, however, and especially with the adherents of the Vienna School of dermatology, it has fallen into disuse, Kaposi (198, 101) speaking of it as possessing "*nicht den geringsten Einfluss auf den Verlauf der Hautkrankheiten*," a statement which is absolutely at variance with fact, as any one may easily ascertain who will take the trouble to procure a good quality of the herb and employ it in the proper manner and in suitable cases. Whoever does this will find that its influence is as marked as that of cinchona in malaria, or mercury in syphilis, and that after a little experience its effects can be predicted with almost if not quite as much certainty. My own acquaintance with this drug dates back about twelve years, and I first employed it on the recommendation of and in the manner prescribed by Hardy (67), that is, combined with senna as a purgative. An ounce of Viola tricolor with half an ounce of senna, made into a hot infusion with a pint or more of water, one-half taken at night and the remainder in the morning, usually produces free purgation. This may be considered the maximum dose for an adult. It is usually better to divide this into two or three portions, to be taken on successive or alternate nights. This may be kept up for some weeks, regulating the dose according to the effects on the bowels, two stools a day being all the catharsis that is usually desirable. Latterly I have, unless there was a distinct indication for the use of laxatives, used the senna for the first week only, or have omitted it altogether.

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* Medical Botany, Philadelphia, 1847, p. 140.

† Nouveau dictionnaire des plantes médicinales. Paris, 1876, p. 381.

‡ Arzneimittellehre. Jena, 1853, p. 354.

Under these circumstances one or two drachms of the herb, with half to one pint of hot water, are made into a tea to be taken in twenty-four hours. The herb being placed in a bowl, the water is poured over it and covered with a plate; the infusion is allowed to steep till cool. When administered in this manner, in eczema, it very frequently happens that within a few days, or at most a week, notable aggravation of the eruption will occur. It becomes more irritable, itchy, and inflamed, and increases in extent, or new patches may appear on regions of the body not previously invaded. Patients on their return visit will often complain that the medicine has made them worse instead of better, and may form an unfavorable opinion of your skill. This, however, may be avoided if you take the precaution to warn them on the subject, in advance. Some of the older authorities recommend that this aggravation be disregarded, and that the drug be persevered with as before for some weeks without intermission. My own practice, however, has been to give the drug in greatly diminished doses, or to discontinue it for a few days or a week, give some inert potion in the meantime, and after the artificial irritation shall have subsided, to resume the medicine in much smaller quantity than was at first given. It is in eczema only that I have had much experience in the use of Viola tricolor, but it is not every case to which its use is well adapted, or in which it will prove beneficial. This point will be more fully considered in connection with the general treatment of eczema.

A word as to the plant itself. The Viola tricolor is in this country a well-known and favorite ornament of the garden, and the principal effort of the gardener is to encourage the development of large and handsome flowers. It is an accepted fact that many medicinal plants lose their active properties to a greater or less degree by artificial cultivation, and my own limited experience in the use of the garden pansy leads me to the same conclusion with reference to it. The wild and uncultivated plant then should alone be used. It is a native of and abundant in some parts of Europe, but its occurrence in a natural state in this country has, for some time, been an open question. Prof. Asa Gray states that a variety of it is sparingly naturalized in the eastern United States, a small and insignificant form. According to a writer in the *Botanical Gazette*, Feb. '80, it has been found in Pennsylvania, Colorado, and Texas. At all events, the plant is scarce in this country, and for medical purposes we are obliged to rely on Europe for a sufficient supply of the herb. Much of that which is imported is of very poor quality, and it is expedient that before prescribing it the physician should personally examine the herb which will be furnished on his prescription, that is, if he expects to obtain uniform and good results with it.

The preparation to be employed is not a matter of indifference. I have usually employed and prefer an aqueous to an alcoholic one, and most frequently prescribe the infusion prepared as above directed.

The following offers a possible explanation of the activity and efficacy of this drug:

"Mr. Mandelin has begun a chemical analysis of *Viola tricolor*, of which some preliminary results have been communicated by Prof. George Dragendorff, of Dorpat.

The aqueous extracts of the plant having been concentrated to the consistence of honey, and mucilage and salts having been separated as much as possible, by precipitation with alcohol, the resulting solution was deprived of alcohol by distillation, and the residue shaken with ether, which left, on evaporation, a crystalline substance. This was purified by repeated crystallizations from hot water, and afterwards alcohol and ether. When perfectly pure, it had all the properties and reactions of salicylic acid, and was proved to be this substance by proximate analysis. Another substance so far separated by Mr. Mandelin, is tartrate of magnesium.—*Abstract received from Prof. G. Dragendorff*," **152**, '80, 146.

WOORARA, P.; U.S.D.

A. Diaphoresis, **6**, 71.
Produces frequent contractions of the cutaneous muscles of the trunk and head in animals, Bernard, **24**, 2: 131.

XANTHIUM STRUMARIUM, *L.*

C. Herpes, erysipelas, scrofula, **31**, 136.

C. and **D.** Scrofula, **23**, 5: 39.

D. Cancerous affections (*ib.*).

XANTHOXYLUM (*Xanthoxylum fraxineum, Willd.*). U.S.

C. "I once employed this remedy in a case of rheumatism attended with an obstinate eruption on the skin, and succeeded perfectly in relieving both these affections," **21**, 2: 187.

ZINCI ACETAS, U.S.

D. Lupus, Weisse, **104**, 1: 316; **73**, 260; **207**.
Eczema of the face, seborrhœa, **209**.

ZINCI CARBONAS, U.S.

D. Intertrigo, **10**, 1: 219.
Humid ulcers and excoriations, **51**, 6: 83.

REMARKS.—The officinal preparations are: *Zinci Carbonas Præcipitata* and *Ceratum Zinci Carbonatis.*

ZINCI CHLORIDUM, U.S.

D. Lupus, **107**, '44, 1: 92; and many others.

REMARKS.—The only officinal preparation is *Liquor Zinci Chloridum.*

ZINCI NITRAS.

D. Condylomata lata, Aubert, **194**, Oct. 17, '75; Piffard, **152**, March, '76, 80; Marshall, **5** (7th Am. Ed.), 255.
Pemphigus, chancroids, Piffard (*loc. cit.*).
Condylomata, acuminata and lata, **206**.
Chancroids, **208**.

REMARKS.—Aubert, and most others who have employed this agent, have used it in the form of fused sticks like those of nitrate of silver. It is a much more energetic caustic than the latter, and its application is followed by a good deal of pain. The fused sticks are prepared by Dr. Squibb.

ZINCI OLEAS.

D. Eczema, Crocker, **116**, 2/78, 622; Sawyer, **116**, 1/79, 586.

ZINCI OXIDUM, U.S.

D. Herpes, eczema, impetigo, **10**, 2: 173.
Chronic skin diseases with profuse discharge, as eczema, impetigo, excoriations, etc., **13**, 164.

REMARKS.—The only officinal preparation is *Unguentum Zinci Oxidum.*

ZINCI IODIDUM, U.S.D.

D. Syphilitic tubercles and infiltrations, **209**.

ZINCI PHOSPHIDUM, U.S.D.

C. Zoster, Thompson, **193**, Oct. '74; **202**.

ZINCI SULPHAS, U.S.

A. Deadly pallor of the skin, which was milky in its whiteness, Minich, **161**, '75, 208.

D. Pruritus, Johnston, **137**, 1/66, 504.
Malignant growths (Simpson), Smith, **143**, Feb. 14, '80.
(Dried sulphate.) Epithelioma, **204**; **206**.

REMARKS.—For mild astringent action the ordinary sulphate of zinc is usually employed, but as a caustic in malignant growths the *Zinci Sulphas Exsiccata* is to be preferred.

PART II.

THERAPEUTICS.

INTRODUCTION.

Before entering on the consideration of the treatment of cutaneous diseases, it will be wise, I think, to give a thought to the organ with which we propose to deal, and to the relations that it holds to the rest of the economy. We can strip off the skin, and, aided by the microscope, obtain a more or less perfect acquaintance with its structure, and, so far as its anatomy is concerned, we may regard it as an independent tissue, and study it as such; but when we inquire into its physiology we are immediately impressed with its close connection with the entire system. It is no longer an independent tissue, with functions intended solely for its own benefit, but, in reality, is simply a portion of the whole, existing by its dependence on the rest, and without which the rest would perish. Occlusion of the pores by an impermeable covering results in speedy death, and, *per contra*, removal of the entire integument, or even its outermost stratum, the horny layer of the epidermis, would be followed by a like termination. These two facts point to the necessity of preserving the integrity of the skin, if we would have the rest of the body in a state of perfect health.

The ready disturbance of the cutaneous functions by the influence of internal agencies may be exemplified in many ways; thus, the inhalation of a small quantity of nitrite of amyl is immediately followed by a hyperemic condition of the facial integument, or, the ingestion of a suitable quantity of jaborandi is followed by an excessive discharge of moisture from the general surface. Numerous other instances of cutaneous disturbance following the ingestion of various substances are noted in the first part of this work, and we need here but allude to arsenic, to belladonna, to cinchona and its derivatives, and to the iodide and bromide of potassium. Not only these, but immaterial influences as well, are capable of impressing the cutaneous system. Fear blanches, and anger reddens the surface, while an immodest word or sight may bring a blush to the cheeks of the virgin. The skin, therefore, in all its physiological and functional relations is connected in the closest manner with the rest of the economy —and so with its pathology. This statement it would hardly be necessary to make, were it not that we are asked to believe, by the Vienna school, that cutaneous diseases are with few exceptions purely local affairs, and not in any way dependent on pre-existing derangement of the general system or of particular organs. This is essentially the doctrine of HEBRA, and is very generally accepted in Vienna by those who have received their inspiration direct from the lips of the great teacher. It is not, however, generally admitted in Germany proper, and hence cannot, with propriety, be called the doctrine of the "German" school. Outside of Austria, upon the continent and in Great Britain, it obtains very little practical recognition. In France there is not a teacher who proclaims it, nor even a writer, so far as I am aware, that advocates it. In neither England, Scotland, nor Ireland is it accepted by a single public teacher. There are a few of the former pupils of HEBRA, however, who spare no opportunity of declaring that the views held by their predecessors and elders are erroneous, and that true light in dermatology is to be sought and found only on the banks of the Danube; and these views they urge with great zeal, and, it must be added, with great immoderation. In fact, the devotion shown by the partisans of HEBRA to the teachings of their master is equalled only, in modern times, by that of the disciples of HAHNEMANN to theirs, and there is also a striking parallelism between their methods. Given a condition of irritation of the skin, *e.g.*, an acne or a chronic eczema, and the disciples of HEBRA attack it with an irritant, *e.g.*, green soap, or the like. It must be distinctly understood, however, that the doctrines of the present Vienna school are not *German*, but simply *Hebraic*, and in their way are as fully exclusive in their tendencies as the Hahnemannic; doctrines that lead to too narrow a conception of disease, and as a consequence to treatment that is less efficient than it might be. It must be added, however, that as a teacher Hebra was pre-eminent; that his writings are marvels of force, perspicuity, and persuasive rhetoric. They are invaluable to every student of cutaneous disease, and the following pages will bear ample testimony to the author's appreciation of them.

The French school, under the leadership of ALIBERT and his successors, have gone to the opposite extreme. The truth, we believe, lies between the two, namely, in a proper estimate of the internal etiological factors, as well as of the appearances presented by the lesions. The consequence will be a judicious combination of internal with local treatment, which we are satisfied is far better than exclusive devotion to either.

Coming now to the points that more closely concern us, we find that cutaneous, like other diseases, are readily divisible, from a therapeutic stand-point, into three principal classes:

First.—Those that are characterized by an acute invasion and a definite course, that is to say, those that are self-limited, as, for instance, Zoster. Here the physician has comparatively little to do, except, perhaps, to shorten their duration and render them less distressing to the patient during their continuance.

Second.—Those that are chronic, and for which neither science nor art has yet found efficient remedies. Keloid and Ichthyosis may be taken as examples. Here the physician's labors will be chiefly confined to making a diagnosis, rendering a prognosis, and employing such palliatives as shall from time to time become necessary.

Third.—Those that are usually chronic, and without definite limit, and concerning which it is impossible to predict, with any certainty, their probable duration when left to the unaided powers of nature. They are in most instances perfectly, though often with difficulty, curable. Chronic Eczema, Acne, etc., may be taken as examples. This class embraces the vast majority of cases that will apply for treatment, and the physician of to-day, more fortunate than his predecessor of fifty years ago, will be able to achieve results that will enable him to rescue cutaneous therapeutics from the position it so long occupied as the *opprobrium medicinæ.*

We therefore with confidence invite the reader to a more detailed consideration of the subject.

The therapeutics of cutaneous diseases includes not only the use of drugs, but also attention to general hygiene; and in certain affections both electricity and the actual cautery have proved of service. Concerning hygiene little need here be said, as its importance is recognized by all, and details on this point would be out of place in a special treatise like the present. Drugs, electricity, and the cautery merit a few words.

DRUGS.

Many years ago it was written that, "A skilful physician will never rely on the curative virtues of medicines unless he has procured them in the most pure and perfect state," an injunction that was hardly necessary unless there was a suspicion in the writer's mind that medicines were not always in this desirable condition. The late Dr. BIGELOW was perhaps of the same opinion, when he wrote, "There is perhaps no branch of commerce in which names are substituted for realities with more success than in the commerce of drugs." * The importance of attention to the quality of drugs cannot be easily overestimated; and we should recollect, when certain effects are asserted to follow the employment of certain drugs, that failure to obtain these effects may be due to the causes suggested. We may rest assured that "names" will not prove useful substitutes for "realities." It is fully as important, that, having good drugs the physician should know how to use them. In the case of drugs with the use of which he is not familiar, it is certainly wise to consult every accessible work of reference in order that before prescribing them he may obtain the fullest possible acquaintance with their effects. Mr. **Erasmus Wilson** has expressed these ideas so forcibly that I shall quote him as follows: "I wish it were unnecessary to add as a caution that the material of our remedies must be of the very purest kind, and that where this is not the case, we may be defeated in our object, and, with loss of reputation to ourselves, lose faith in our remedies and lose faith in our faith. On the other hand it must be admitted that we may sometimes fail with the most excellent materials for the want of a sufficient familiarity with their use. I will venture to relieve the prosaic weariness of a lengthened detail by the narration of a couple of anecdotes, which convey a moral bearing on the subject before us. A wealthy merchant who knew the value of material, but had little conception of the genius requisite for its manipulation, gave a commission to an artist of eminence to paint him a picture: price was no object—the fee, to use a technical term, was enormous; but—for there was a *but,* and to this *but* the merchant found some difficulty in giving utterance—'But, sir,' he said, 'may I rely upon your honor that you will employ none but superfine colors?' The other anecdote is probably quite as generally known, but, like the former, conveys an appropriate lesson. An amateur artist had been gazing with admiration for a long time at the splendid results of the brush of one of our famous painters. At length, inspired by enthusiasm, he ventured to ask a question which was nearest to his heart, and embodied, as he believed, the secret of his own prospective success. 'And may I, sir,' he inquired, 'humbly ask you *with what* you mix your colors?' to which, as you may be aware, the answer was thundered out, 'With brains, sir; with brains.' Now, in the treatment of diseases of the skin, we must endeavor, firstly, to secure for our patients 'superfine materials,' and, secondly, we must employ them with 'brains.'" (78, 71.)

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* A Treatise on the Materia Medica, etc., Boston, 1822.

ELECTRICITY.

In 1870 the writer commenced a course of systematic experimentation with a view to ascertain what, if any, influence electricity would have on the relief of cutaneous diseases.* The early observations were sufficiently encouraging to warrant frequent recourse to this agent as a therapeutic measure. Before speaking of its special applications, a few words must be said about the agent itself. It is known that there are three principal forms of electricity: the static, or franklinic; the induced, or faradic; and the constant, or galvanic. Of the last I will speak first. This agent is capable of four distinct applications in connection with cutaneous affections. These are to produce *catalysis*, to produce *electrolysis*, to produce *coagulation*, and to produce an *intense heat.*

By *catalysis*, we here mean certain changes which result in a modification of the circulation and nutrition of the part. Thus if the current from a galvanic battery, composed of a number of cells properly joined, be passed by means of sponge-covered rheophores, we may in one instance, by stimulating the nervous system or the circulation, exalt the vitality of parts in which it is depressed; in another instance we may subdue pain; in another remove pruritus; in a fourth, hasten the resolution of an inflammation; and in a fifth, reduce infiltration. These are all affected by modifications of the local nutritive processes, whereby absorption is rendered more active, and normal action supplants the pathological.

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* **190**, Feb. 11, '71, 144; The Doctor, May and Aug., '71; **143**, *Mar.* 11, '76.

By *electrolysis* we mean the direct destruction by chemical decomposition of the tissue-elements and of the fluids which surround them. The simplest illustration of the electrolytic effects of the galvanic current is the decomposition of a saline solution, as, for instance, that of iodide of potassium. If the current be passed through such a solution, the salt and also the water is separated into their component elements. Oxygen, acid, and similar bodies collect in the neighborhood of the positive pole, while hydrogen, alkalies, and basic bodies collect around the negative. If, now, instead of dipping the poles into a saline solution the current is introduced into the tissues by means of needles, similar phenomena may be observed. The result is dissociation of the elements of the tissue, and if albuminous substances are present they will tend to *coagulate* around the positive needle.

The fourth application of galvanic electricity is the production of heat. If a strong current be passed through a thick copper wire, connecting the poles of a battery, there will be but slight resistance to its passage, and but little effect on the wire will be noticed. If, however, a piece of fine platinum wire be introduced into the circuit the free passage of the electricity will be hindered, and the platinum will become hot, the degree of heat depending on the force of the current and the size of the wire. Such an arrangement constitutes the galvano-cautery, of which mention will be made later.

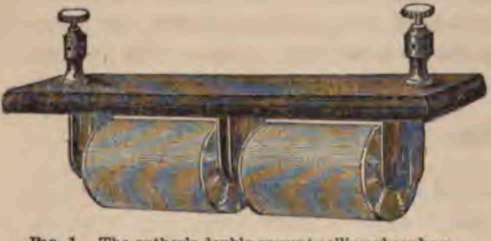
FIG. 1.—The author's double-current rolling rheophore.

In the faradic current the quantity or volume of electricity employed is very much less than in the galvanic, but its intensity * is far greater. This is developed to the highest extent in the Ruhmkorff coil.

In static or franklinic electricity the tension is still greater; but I am not aware that it has been much employed in cutaneous affections.

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* *Intensity* is used as the equivalent of *tension*, *i.e.*, the power of overcoming resistance.

In applying the constant or the induced current to the skin the ordinary appliances of the shops will answer most purposes. I have found, however, a rolling double-current rheophore sometimes very convenient (Fig. 1).

This instrument is especially useful when we wish to use labile currents and confine the effects of the electricity, as much as possible, to the skin itself. It may be made of different sizes.

The special applications of the different forms of electricity will be referred to in connection with the diseases in which they have been useful.

THE ACTUAL CAUTERY.

The actual cautery has many useful applications in dermatology. In employing it, however, the importance of maintaining and using a temperature appropriate to the operation in hand must not be overlooked. With the older iron cauterizers this was difficult, as the metal began to cool the moment it was withdrawn from the fire, and hence if the operator desired to employ the heat at a particular temperature he was often obliged to manipulate with a degree of rapidity that was inconsistent with proper care. This is especially true of small instruments which rapidly lose their heat.

The effects produced by different degrees of heat vary greatly. If a white heat is employed the pain is not so great, the slough is smaller, the ulcer heals quickly and with very little reaction, and the scar possesses far less of the retractile character which is displayed by cicatrices resulting from burns at a comparatively low temperature, as those from burning clothes or boiling water, the scars from which so often produce serious deformity, a fact which must always be borne in mind in cautery operations. In certain operations a white heat is not desired, as a dull heat will better fulfil the special indications. We should therefore well consider the temperature best suited to the particular case, and should possess the means of maintaining and controlling it. The difficulty of accomplishing this, with the blow-pipe or furnace as the source of heat, greatly limits the use of the ordinary cautery irons.

Twenty years ago, Middeldorff brought into prominent notice another method of generating heat for surgical purposes, namely, by the aid of electricity. By this means he obtained perfect control of the temperature, but the apparatus was expensive and cumbrous. The consequence was that galvano-cautery was rarely used, except imperatively demanded, and many useful applications of the method were neglected or replaced by less efficient means of treatment.

During the past few years, however, the prominent objections to the employment of the galvano-cautery have been dissipated by the invention of several exceedingly efficient and convenient batteries of American construction.* The one shown below (Fig. 2) is adapted to major as well as minor operations. It weighs 12 lbs. and its dimensions are 6½ × 9 × 10 inches. It is capable of heating twenty inches of No. 22 platinum wire, and keeps up a working heat for from thirty to forty minutes.

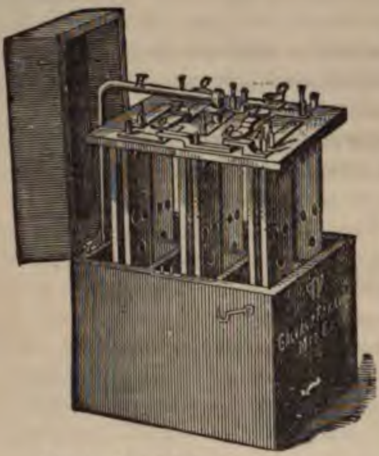

FIG. 2.—The author's galvano-cautery.

For very many purposes the galvano-cautery is inferior in convenience to the "thermo-cautery" invented by Paquelin of Paris. With it, as with the galvano-cautery, any desired degree of heat can be obtained and maintained for a long time, at the will of the operator, or varied from moment to moment as may be necessary.

Besides these the burning-glass, or solar cautery, deserves mention, as it is within the reach of all, and when skilfully handled is capable of being made exceedingly useful. A lens of four inches diameter and six inches focus will answer perfectly for the destruction of small growths, nævi, etc. The lens should be fitted with a handle and should not be employed in an operation until the surgeon has acquired some skill in adjusting the focus, etc., by practice on some inan-

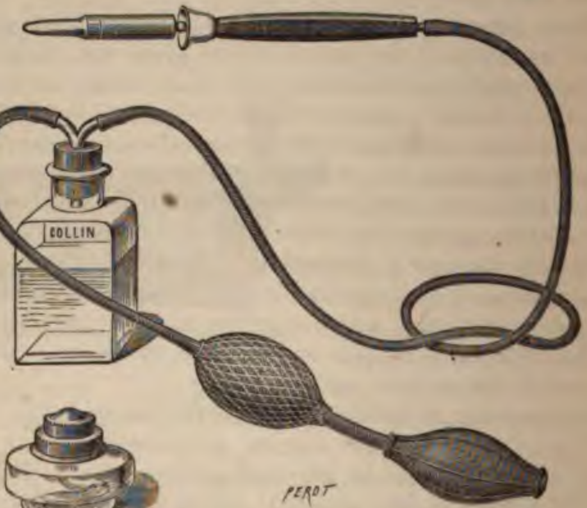

FIG. 3.—Paquelin's thermo-cautery.

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* These instruments are in every way superior to anything of the sort manufactured abroad. They are likewise much cheaper than the less efficient instruments of a few years ago.

imate object, as for example, a piece of board. The effort, of course, is to instantly focus the heat on the exact spot that we wish to destroy, without parbroiling an indefinite area of surrounding skin. In using the solar cautery the glare of light is so intense at the focus that it prevents a distinct view of the point to which the application is made. This may be remedied by wearing blue-glass spectacles.

The principal diseases in which the actual cautery may sometimes be used to advantage in dermatological practice are angioma, nævus, rosacea, varicose veins, lupus, epithelioma, ulcers, chancroids,* venereal warts, and pedunculated tumors of the skin. We have employed it in all of these affections, and find that it often accomplishes results not so easily or conveniently attainable in other ways. The value of the actual cautery was appreciated by Hippocrates who is credited with the following: "*Quæ medicamenta non sanant, ea ferrum sanat. Quæ ferrum non sanat, ea ignis sanat. Quæ vero ignis non sanat, ea insanabilia reputare oportet.*"

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* Archives of Clinical Surgery, November, 1876.

DISEASES.

DIATHESES.

By diathesis in dermatology, we understand a general constitutional condition or dyscrasia, which is accompanied by, or predisposes to the development of certain forms of cutaneous disease. The diathesis may be hereditary or acquired. The important diatheses to be considered in this connection are the Scrofulous, the Rheumic, the Syphilitic, the Leprous, and the Ichthyotic. The last three will be considered in connection with the diseases Ichthyosis, Leprosy, and Syphilis. The Scrofulous diathesis is so thoroughly recognized and considered in works on general medicine and surgery, that I do not deem it expedient to occupy space for its special consideration. Its interest to the dermatologist resides in its influence as an etiological factor, in connection with lupus, lichen scrofulosorum and a variety of chronic dermic abscess, sometimes called "phlegmonous scrofulide." The presence of this diathesis, however, does not exclude the occurrence of some other forms of cutaneous disease; and in many cases it exerts a modifying or complicating influence on them.

The rheumic, or dartrous diathesis, as it is called in France, is the predisposing cause, I believe, of eczema, psoriasis, and pityriasis. As these three affections include fully one-fourth of all cases of skin disease that will present themselves for treatment, it is obvious that the constitutional condition which underlies them should be very carefully and fully considered. My own views on the subject were first detailed in a paper presented to the New York Academy of Medicine, in 1875, and are here reproduced, as increased observation and experience, and the results of treatment confirm me in the belief that they are substantially correct.

The Rheumic Diathesis.

This name was chosen, firstly in consequence of its etymological signification, which implies the idea of exudation; secondly, because the blood condition underlying the diathesis is probably similar to, if not identical with, that concerned in the production of rheumatism and gout; and thirdly, because the vulgar name *salt-rheum*, so commonly used in this country, embraces the affections under consideration.

The first point to be considered is, whether the condition which we have called the rheumic diathesis really exists; second, we must consider its nature; and third, the propriety of assigning to it the three affections mentioned.

Argument in support of the existence of the rheumic diathesis would hardly seem to be necessary were it not for the fact that it is denied *in toto* by the Vienna school; a school whose many valuable contributions to dermatology entitle its views to our highest respect.

Looking to the past, we find that from early times in the history of medicine there has been a more or less prevalent belief in the existence of a general condition intimately connected with certain cutaneous affections, and which was recognized by the Greeks under the name of *psora*. This term, though frequently used with great vagueness, still represented a prominent idea, and corresponded to the "*scabies*" of the Romans (Celsus), the affection to which the name *eczema* is to-day applied.

Paulus Ægineta included psoriasis, as well as eczema, under the term psora.

Rhazes describes two kinds of "scabies," the moist and the dry, and places "pruritus" in intimate connection with them. He attributes them all to "*humores adustos*," and originating "*ex sanguine et phlegmate falso*." The "scabies" here mentioned was equivalent to the ancient psora or modern eczema, and the "pruritus" probably corresponded to the lichen or papular eczema of the present day.

Leaving the distant past and coming to the dawn of modern systematic dermatology, we find Plenck[*] using the term "scabies" with very great looseness, making no less than eight varieties, of which but one, "scabies verminosa,"[†] corresponds to the affection now called by this name. The "scabies capitis" of Plenck, however, plainly includes eczema and "*est critica evacuatio humoris acrimoniosi, qui per glandulas capillitii excernitur*."

Later we find that, instead of the Roman "*scabies*" or eczema being the principal feature of psora, the modern scabies or itch proper, by a curious confounding of terms, became its chief synonym. The itch, then, became the representative of psora, and, although by most regarded as a local affection, was still by many believed to be of constitutional origin. This view was especially elaborated by Hahnemann,[‡] and carried to such extravagant lengths that reaction was the natural consequence. The idea of the constitutional nature of the itch was finally overthrown by Renucci's[§] demonstration that the acarus scabiei was unquestionably the cause of the affection, and from that time the idea of psora as a constitutional disease no longer existed in the minds of the majority. Modern scabies was the parasite which destroyed the diathetic claims of the ancient and more respectable psora, and hence the German notion of the local nature of all these affections.

Turning to England, we find the original idea prevalent in the early part of this century. Parr,[‖] speaking of psoriasis, says, "It is more strictly the *dry itch*, which, in compliance with authors, we have mentioned under the last article" (Psora). "It is always apparently connected with some disorder in the constitution, often with gout and rheumatism. The seminium of the disease is apparently in the constitution."

Later this use of the term psora became corrupted, as in Germany;

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[*] Doctrina de Morbis Cutaneis, p. 41, Viennæ, 1776.

[†] "Est Scabies, in qua Vermiculi seu Acari reperiuntur," p. 42.

[‡] Die chronischen Krankheiten, Dresden u. Leipzig, 1828.

[§] Gras, Recherches sur l'acarus, Paris, 1834.

[‖] London Medical Dictionary, American edition, Philadelphia, 1819.

and we find Plumbe[*] confounding it with parasitic scabies. The constitutional nature, however, of the affections which it formerly included, is still maintained in England.

In France we find a cutaneous diathesis, distinct from syphilis and scrofula, accepted almost without dissent; this diathesis is commonly known as the "*dartrous*," and, synonymous with dartre, we find a revival of the ancient term *herpes*.

Hardy[†] believes that the term *dartres* may, with propriety, be applied to a very natural family of cutaneous affections, possessing many common characteristics, to which he alludes. In general terms he describes those subject to this diathesis as "in appearance enjoying all the attributes of good health, but who are yet in a peculiar state which cannot be considered perfectly sound. Their integument is habitually dry, and perspiration is diminished. The skin is often the seat of lively itching, even in the absence of eruption. The appetite is generally well developed, and it is well known that the dartrous eat a much greater quantity of food than other patients in analogous conditions. Another important peculiarity is the extreme sensibility of the skin, and the facility with which it is influenced by the lightest and most fugitive impressions. Sometimes general excitement, alcoholic excess, watching, use of coffee, of certain kinds of food; sometimes a local excitement, irritating frictions or the application of a plaster, will give rise to an eruption, often ephemeral, and not dartrous in character, but which reveals a particular predisposition of the economy, and the existence of a latent vice which needs but a favorable occasion to manifest itself." To this diathesis Hardy ascribes eczema, lichen, psoriasis, and pityriasis.

Gigot-Suard,[‡] under the title of *herpetism*, includes the affections just mentioned, and, in addition, a few others whose claims to this position appear to me to be somewhat doubtful.

Bazin[§] separates the dartre or herpetis of Hardy and the majority of French writers, into two principal diseases, which he calls respectively dartre and arthritis, and between which he endeavors to draw distinctions, which are in many cases so delicate as to be hardly appreciable. He adds to the list of affections a number which appear to be accidental rather than essential to either of these diatheses.

In Italy, where cutaneous diseases have been studied with great zeal and scientific care, we find a general acceptance of the herpetic and arthritic diatheses.

Coming finally to America, we find a very widespread belief in the existence of a constitutional condition manifested by certain cutaneous eruptions, which have received the common name of *salt-rheum*. It is this diathesis, equivalent to the *dartre* of Hardy, the *herpetism* of Gigot-Suard, the *herpetis* and *arthritis* of Bazin, and Italian writers, and the *psora* of the ancients, for which I propose the term *Rheumic* as a designation.

The existence of this diathesis cannot be considered completely proved, as the very nature of the case renders an absolute demonstration impossible. In this, as in most other theoretical questions in medical science, we are obliged to form our opinions by the preponderance of probability on one side or the other, and the ability of the theory to explain the observed phenomena. In favor of this diathesis, we have the concurrent opinions of many intelligent and experienced observers, running through long periods of time, and by its acceptance a means of explaining many occurrences which would otherwise be inscrutable.

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[*] Practical Treatise on the Diseases of the Skin. fourth edition. London, 1837.

[†] Leçons théoriques et pratiques sur les maladies de la peau. Paris, 1860.

[‡] L'Herpetisme. Paris, 1870.

[§] Leç. théoriq. et cliniq. sur les aff. cut. de nat. arth. et dart. Paris, 1868.

The second question, which requires consideration in this connection, is the nature of the Rheumic diathesis. This is not simply a matter of theoretical interest, but is of the utmost practical importance from a therapeutic point of view, since a correct understanding of the nature and etiology of the affections depending on it enables us to conceive and apply rational methods of treatment.

The older views upon this subject are not of much value, and even when we come to the present century we find very little clearly formulated. The English writers, as a rule, favor the idea that it usually depends upon the condition which gives rise to gout. **Schönlein** held that it, or at least one of its manifestations (psoriasis), was due to uroplania (an excess of certain urinary ingredients in the blood). This view **Hebra** expressly condemns. **Hardy** attributes the diathesis to a peculiar vice of the constitution, of the nature of which he is ignorant; **Bazin**, so far as his arthritides are concerned, to the same general blood-conditions which predispose to inflammation of the joints, both rheumatic and gouty; **Gigot-Suard** to uric, sometimes to oxalic acid. It will be seen, then, that all the decided opinions which have been expressed, concerning the nature of the diathesis, by those who believe in its existence, are one in idea if not in words, and imply the existence of some *materies peccans* as the efficient cause of its manifestations. The views above stated are in the main based upon clinical observation, with the exception of **Gigot-Suard's**,* which derives additional weight from the results of experimental investigation (detection of uric acid in the scales and secretions in these affections, and the induction of similar cutaneous lesions, by the ingestion of uric and oxalic acids). My own view, derived from observation, study, and experiment,† harmonizes with those mentioned. It may therefore be formally stated that the affections pertaining to this diathesis are, in all probability, due to the accumulation in the blood of an excess of certain excrementitious substances, and presumably those which are also efficient in the causation of gout and rheumatism, with perhaps the addition of a few others whose relations to morbid conditions have not as yet received much attention. Although it is far from being susceptible of demonstrative proof, it is more or less probable that the following are the noxious agents, namely: uric acid, lactic acid, oxalic acid, creatin, creatinin, and possibly others. The first, fourth, and fifth of these are always derived from pre-existing albuminoid substances; the other two sometimes from albuminoids, and sometimes from substances belonging to the amylaceous and saccharine groups, and all of them represent either steps or side-products of the processes which bring about the metamorphosis of food into tissue, and that again into substances ready for excretion. Our present knowledge of physiological chemistry will not enable us to trace the exact processes and successive steps which lead to the formation of these bodies, but I think it will warrant the assertion that the general process is one of oxidation. In other words, that albuminoids (*e.g.*, roast-beef) entering the body as food, finally leave it as urea, mainly through the instrumentality of oxidation, and, if the oxidation of the received albuminoids is incomplete, we have a diminished proportion of urea, and an increased proportion of uric acid, etc. This condition may be conveniently denominated, after BENCE JONES,* one of *suboxidation.*

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* *Op cit.* and l'Uricémie. Paris, 1875.

† In the blood of two out of three psoriasic patients I found oxalic acid by dialyzing the serum. A dilute solution of chloride of calcium was placed in the outer vessel, and the result was a crop of octohedra, dumb-bells, and "spherites" of oxalate of lime.

This incomplete oxidation appears to be, to a certain but limited extent, a normal condition, and suboxidized products are found in very small proportion in healthy blood, and ready for removal by the kidneys; and it is only when they accumulate unduly that they prove harmful. Some of these bodies are themselves, or form in the blood, compounds which are less soluble than the urea, and are not so readily excreted, and hence tend to accumulate. This accumulation occurs whenever renal action is deficient, although the production of the uric acid, etc., may be in normal quantity. Or, on the other hand, overaccumulation may occur from overproduction, even when the kidneys are removing from the system the usual proportion of these excreta.

In the former case the kidneys are at fault, and the difficulty arises from either organic or functional disease of these organs, usually the latter. It is probable, however, that the overaccumulation is more frequently due to overproduction than to deficient excretion. When this is the case it arises from one of two causes: first, deficient oxidation of a normal supply of ingested albuminoids; or, second, oxidation being normally active, it is still incapable of fully meeting the requirements of an occasional or habitual oversupply of peptones, and hence a quantity of only partially oxidized and very insoluble products is left in the circulating fluid to be with difficulty excreted.

This duty the kidneys will perform up to a certain point, and for a certain length of time; but at last, failing to be completely removed, they seek other channels of exit, chiefly the bowels, but in part also the skin.† The bowels, being accustomed to the office of depuration, do not complain when any slight extra demand is made upon them; but the skin, less accustomed to the performance of this function, exhibits its impatience by *pruritus* and its rebellion by *eruption.*

If the supply of ingesta is normally and properly adapted to the body's needs, but oxidation is imperfect, we are compelled to seek deeper for a cause. It is to be found either in a deficient supply of oxygen in the blood, or, if the supply be hygienically sufficient, in a defective utilization of it.

This leads us to inquire how and where the general processes of oxidation are carried on in the body. Without stating the many theories which have been advanced in explanation of this process, I will simply offer the one which seems to me to have the greater probabilities in its favor, to wit, the one recently urged with so much force by MURCHISON.‡ This writer believes that the liver is the principal seat of the oxidizing processes, and that deficient functional activity of this organ is the *fons et origo* of most of the troubles arising from suboxidation. I have the more readily accepted the views of MURCHISON, as deductions from a different set of data had previously led me to suspect the liver of being intimately connected with the production of the Rheumic diathesis. It is also probable that a certain amount of oxidation occurs in the tissues, and even in the blood itself.

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* Lectures on some of the Applications of Chemistry and Mechanics to Pathology and Therapeutics. London, 1867.

† Gigot-Suard's Experiments (q. v.) seem to prove this. G. Bird (Urinary Deposits, etc.) has observed eczematous eruptions frosted with crystals of urate of soda, and I have myself obtained uric acid from the sweat of rheumic patients. Lactic acid has been found in it by others.

‡ On Functional Derangements of the Liver. London, 1874.

Let us now return with the argument, and in the light of his theory trace a pound of beef from the mouth to the urinal. Entering the stomach it is acted upon by the gastric juice and changed into albuminose or peptones.* These are received by endosmosis into the portal capillaries, and are conveyed to the liver; here they wholly, or in part, undergo oxidation, and are conveyed thence by the hepatic vein to the vena cava, to the right heart, through the lungs, to the left heart, and from it to the general circulation, through the medium of which they are distributed to the tissues. Here, by further oxidation, perhaps, they become tissue, remain as such for a time, until, by still further oxidation, they are released from their morphological condition, and re-enter the circulation, perhaps as urea, perhaps only as substances capable, by still further oxidation, of becoming urea, and ready for removal by the kidneys. If, now, these normal processes be anywhere obstructed, we have in the circulation the very insoluble products of deficient oxidation, which, unable to entirely escape by the kidneys, seek a vicarious exit, in part by the skin, and in so doing give rise to the cutaneous troubles we are considering.

What causes the tendency to deficient oxidation by the liver and other organs concerned? This is a question which we cannot definitely answer. Excluding cases characterized by a deficiency of red corpuscles, anæmia, chlorosis, etc., in which the proximate cause is very evident, we come to others, and by far the majority, concerning which we only know that sometimes the difficulty appears to be hereditary, and at other times acquired, and that in either case it is always difficult, and sometimes impossible to remedy, and that our efforts must be confined to controlling its results rather than to eradicating their cause.

There is, however, another important change in the constitution of the blood, and one which results directly from this overaccumulation of suboxidized product. Uric, lactic, and oxalic acids, combining with the free alkalies or decomposing the alkaline carbonates in the serum, reduce its alkalinity—that is, render it subalkaline. Now, it is well known that processes of oxidation, whether within or without the body, are more readily accomplished in the presence than in the absence of an alkali; in other words, alkalies assist oxidation, and their diminished proportion in the blood-serum and the tissues greatly retards this normal process.† The importance of this fact, from a therapeutical point of view, will be immediately perceived.

This diathesis of suboxidation does not manifest its effects upon the skin alone, but also upon the mucous membranes and the joints; and, in all probability, underlies certain chronic organic lesions of the viscera. These, however, do not immediately concern us, and hence will not be specially referred to.

The third question which we are called upon to determine in connection with this diathesis is, the propriety of considering eczema, psoriasis, and pityriasis, among its dependents.

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* I am considering simply the nitrogenous principles of the beef, not the fats, salts, etc.

† Bence Jones lays special stress upon this. A familiar example is the oxidation of sugar in Fehling's reaction, which will not occur except in the presence of an excess of alkali.

If these affections do depend upon this or any other diathesis or common constitutional condition, we should expect them to exhibit certain general characteristics indicating a mutual relationship. This they do, and the principal features which they possess in common, and which serve to point to this relationship, are the following:

They are not contagious.

They are frequently general; not, however, by simultaneous invasion of the surface, but by spreading from different foci.

They are frequently symmetrical.

They are usually chronic.

Their natural duration is indefinite.

They are obstinate, and do not readily yield to treatment.

They are frequently observed in different members of the same family.

They are frequently observed in different forms in different generations of a family.

Two or more forms may be present at the same time, or may appear successively.

They do not always preserve their individuality, but sometimes merge one into the other.

Relapses are frequent.

They sometimes alternate with affections of other organs, especially of the pulmonary and gastric mucous membranes, and of the joints.

They itch.

The lesions are always superficial.

They never leave cicatrices.

They are more or less amenable to certain definite methods of treatment, which have little if any effect upon other cutaneous affections.

These many common features, together with the results of rational treatment based upon indications deduced from the supposed nature of the affections, tend, with increasing experience, to confirm rather than weaken the views which I have now for some years held concerning this diathesis, and the propriety of classing these affections among its manifestations.

Treatment.—Having now considered the nature of the Rheumic diathesis, it remains to be seen whether we have any means at our command by which it may be counteracted, or its effects in any way modified. The measures which may be adopted for this purpose come under two heads, namely: rational and empirical. The rational treatment will be best understood by taking a retrospective glance at the morbid conditions present and their cause.

1. We have the blood surcharged with insufficiently oxidized excrementitious principles, less soluble than urea, the substance into which they would be changed if normal action were taking place.

2. The blood is subalkaline.

3. The accumulation in the blood of these excreta is due either to deficient action of the kidneys; or—

4. The kidneys acting normally, these substances are produced in excess.

5. This excess is due either to oversupply of albuminoid food, the surplus not being thoroughly oxidized; or—

6. The nitrogenous ingesta, not being excessive, there is failure on the part of the oxidizing processes to fully perform this function.

7. There are strong reasons for believing that the liver is the organ more particularly at fault in this connection.

The two principal indications, then, are to depurate the blood and to promote oxidation, and these we may expect to fulfil, with more or less success, by means at our command.

Depuration of the blood is to be effected by calling into more vigorous action either the kidneys, bowels, or skin. If the trouble is due to defective renal activity, a point which may be determined by careful estimation of the amount of nitrogen daily discharged in the urea, uric acid, etc., we must treat these organs with some leniency, and be careful not to urge them too much, since by undue stimulation we may increase the difficulties under which they are laboring, and defeat the very object we have in view, to say nothing of the risk of doing more serious damage. We will be obliged, therefore, to depend upon the skin and bowels for the fulfilment of the first indication. The functional activity of the skin is increased by exercise, bathing, and warmth; and is most rapidly and vigorously influenced by the hot-air or Turkish bath. This latter agent, in the absence of extensive eruption, is almost always of service, and, when properly managed, is not liable to be followed by injurious after-effects; it may, therefore, be applied frequently, even daily, with the happiest results.

If the bowels are to be stimulated, we may employ various cathartics, the most useful in this connection, perhaps, being the ordinary senna and salts, given in sufficient doses to produce one or two loose evacuations daily. **Hardy** praises very highly an infusion of wild pansy (viola tricolor), combined with senna, in about the following proportions:

℞.	Violæ tricoloris	ʒ j.
	Sennæ	℥ ss.
	Aq. bullientis	O ij.
M.		

One-fourth to one-half of this quantity to be taken daily, and the amount to be diminished gradually as the necessity for its employment lessens. **Hardy** states that he has given this purgative for two or three months at a time without ill effect.

In place of these remedies we may employ some of the *natural* mineral waters, as those of *Seidlitz*, containing sulphate of magnesia largely, without chlorides; of *Pullna*, characterized by its richness in sulphates of magnesia and soda, together with chlorides; or of *Friedrichshall*, containing both soda and magnesia, but less abundantly than Pullna. The native waters which seem to approach most nearly in chemical composition to those above noted are the *Estill* and *Crab Orchard* Springs of Kentucky.*

This active purgation, however, I believe is rarely required, the condition necessitating it (defective renal action) being the exception, and by no means the rule, as numerous quantitative analyses have indicated a normal excretion of nitrogen.†

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* We know so little concerning the native mineral waters, that it is difficult to speak confidently as to their effects. Many of them, especially those of this State (New York), contain a large proportion of lime (sulphate and carbonate), which does not appear to me to be a desirable ingredient in these conditions.

† This statement is chiefly based upon urea determinations. The quantitative analysis of uric acid being tedious, and often unsatisfactory, has not been so frequently employed.

If the kidneys are perfectly healthy, we may leave the bowels entirely alone and call upon the former to perform most of the depurating work. This is effected by diuretics, and the ones specially serviceable in this connection are *Vinum Colchici, Infus. Digitalis, Balsam of Copaiba, Propylamine, Carbonate of Lithia, Acetate of Potassium, Vichy water*, etc.

These remedies, one and all, appear to exert a marked influence upon the urine, notably increasing the amount of solids daily excreted in this fluid. They are, moreover, among our chief reliances in gouty and rheumatic conditions generally. The Carbonate of Lithia and Vichy, besides being diuretic, tend in addition to restore the normal degree of alkalinity to the blood, and by their presence as alkalies to assist oxidation. These different diuretics may be used singly or combined, and for a considerable period. Lithia and Vichy, however, and alkalies generally, if too long employed, tend to impoverish the blood by diminishing the number of red corpuscles. To obviate this, the use of the Benzoate of Lithia, combined with Iron, has been suggested. A better plan, however, if we anticipate a prolonged use of alkalies and other diuretics, is to intermit their employment for one or two weeks out of each month, giving iron if necessary in the intervals*.

Having put in force the measures necessary for the depuration of the blood, and the re-establishment of its normal alkalinity, attention must be directed to the question of oxidation.

If the conditions present be simply due to incomplete oxidation of an excessive amount of albuminoid ingesta, the course is very clear. It is only necessary to diminish the proportion of this kind of diet. In other words, cut off the meat to a greater or less extent, and substitute for it a larger quantity of bread, vegetables, and fats. Some of these patients are exceedingly fond of meat, and eat it in large quantities, and are sometimes inclined to rebel against restriction of their diet. The quantity of meat eaten by many persons is greatly in excess of the real bodily needs; and this excess being of no service is pretty apt to do harm, and soon brings the patient in contact with his physician. In these cases, then, our principal effort should be to induce the patient to modify his diet in the way suggested, and, even if he is a little rebellious at first, it is surprising how soon he becomes reconciled to the changed conditions, and frequently loath to return to his former dietetic habits.

If, on the other hand, but a moderate quantity of nitrogenous food is ingested, and even this is incompletely oxidized, it will be necessary to institute measures specially designed to increase oxidation. The red corpuscles being the vehicles by which the inhaled oxygen is distributed to the different parts of the body, it is, of course, of the first importance that they should be present in normal quantities. Any notable deficiency in this respect is easily ascertained, and may usually be remedied to a great extent by the use of preparations of iron. This being accomplished, we must endeavor to insure a full supply of oxygen by exercise in the open air, good bedroom ventilation, and the like. In addition we may attempt to furnish oxygen directly to the blood by inhalations of the pure gas, or better, perhaps, by inhalations of oxygen, a small portion of which has been rendered more active by ozonation. Further, we may employ certain medicines which contain oxygen largely, and are believed to be capable of giving it up to the blood, as, for instance, the Chlorate of Potassium. The alkalies already mentioned, which by their presence assist oxidation, are appropriate adjuvants.

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* It must be remembered that we are dealing with chronic conditions, and treatment, to be effectual, must be continued for a long time.

Finally, if the liver be torpid—that is, functionally inactive—we may have recourse to the occasional, and, in some cases, frequent use of certain drugs which have the reputation of being hepatic stimulants, as Mercury, Podophyllin, Iris versicolor, Leptandra, Euonymus, etc.

The above outline of treatment is certainly the one which the conditions supposed to exist would naturally suggest. I should hesitate, however, to offer it, even with personal experience in its favor, were it not that there is abundant corroborative testimony from other sources in favor of each and every one of the remedies mentioned. The value of cathartics, of diuretics, of alkalies, of chalybeates, and of hepatics, as isolated remedies in the affections embraced in this diathesis, is recognized by almost every modern writer, and their employment counselled under various circumstances. Heretofore their use has mainly been empirical, and not founded upon well-considered views as to the special indications which they are expected to fulfil.

Their acknowledged clinical value, however, is strong presumptive evidence of the at least approximate correctness of the theoretical views that have been expressed, and should induce us to seek farther for remedies still better adapted to fulfil the indicated requirements.

It is not of course supposed that in any given case all of the drugs mentioned will be required, but the happiest results are to be expected from their judicious selection, combination, and alternation.

The treatment which I have here advocated for the affections belonging to this group is intended to replace the method which, until recently, has received almost universal adhesion. I allude to the treatment by arsenic.

Arsenic has been and is still by many, perhaps by most, regarded as the sheet-anchor in the management of these affections. Its reputation is based upon the fact that it has the most undoubted control over many of the manifestations of this diathesis; a control evidenced by the prompt removal, in many cases, of the visible lesions and other appreciable symptoms. But does it, in addition to this, exert any influence upon the constitutional conditions which underlie them? Does it in the slightest degree tend to prevent their relapse? I have never been able to perceive that it did. In my earlier experiences I employed arsenic largely, and obtained the effects usually ascribed to it; gradually I used it less frequently, and at present depend upon it but seldom, and have no hesitation in saying that the arsenical treatment of these affections, though often more prompt, is on the whole less satisfactory than the method which I have here detailed.

The foregoing refers simply to the internal treatment of the rheumic affections, or rather of the diathesis on which they depend, but it must not be supposed that dependence is to be placed on it alone. On the contrary, local treatment is of service in almost every case, but can only be considered in connection with the special affections themselves.

ACNE.

Definition and description.—Acne is an inflammatory disease of the sebaceous glands, affecting by preference, if not exclusively, those which are connected with rudimentary hairs and is usually located on the face, neck, chest, or back, or on two or more of these localities at the same time. It is characterized by papules, pustules, tubercles, and indurated nodules, which, on disappearing, may leave cicatrices. It affects both sexes, and is most common between the fifteenth and forty-fifth years, corresponding to the period of most active sexual life. Its course is usually chronic, and when untreated may persist for years. The principal varieties are acne *vulgaris* and acne *indurata*. The former of these is most frequently met with in early life, and may be said to consist in an eruption of small or medium sized discrete papules or pustules, not surrounded by much infiltration, but frequently accompanied with comedones. This affection may pass, by insensible gradations, into acne *indurata*, which consists of larger papules, tubercles, and pustules, with reddened, infiltrated, and hardened bases, and more or less surrounding congestion and infiltration.

Diagnosis.—The diagnosis is usually easy, the only affections with which it is liable to be confounded being a papulo-pustular or tubercular syphilide, a papular eczema, rosacea, lupus, and certain medicinal rashes.

From syphilis it can be distinguished by the previous history, duration, and in early syphilis the more or less general diffusion of the lesions over the whole body. In late syphilis the lesions most nearly resembling an indurated acne usually exhibit an ulcerative tendency. A papular eczema of the face may sometimes closely simulate a mild acne vulgaris. In the former affection the papules do not necessarily correspond to the sebaceous follicles, and, besides, if the eczema has lasted for any length of time, there is usually more interpapular infiltration, and a disposition to the formation of scales. Advanced rosacea is frequently complicated by acne, but when existing alone and in an early stage is characterized by localized congestions, not specially involving the sebaceous glands. In some cases of superficial lupus a plentiful development of papules might suggest an acne, but in acne the individual lesions usually run their course in from one to three or four weeks, while in lupus they persist for months.

Prognosis.—In young subjects the prognosis, under judicious treatment, is usually good, and also in older ones in cases where there is no irremediable *internal* cause for the eruption.

Etiology.—We have elsewhere (87, 220) placed acne in the group of reflex affections, in consequence of a firm belief that in the great majority of instances it is not a primary condition, but one dependent on irritation, derangement, or disease of other organs reflected on the skin. The organs specially involved are those connected with the sexual and digestive systems. Acne vulgaris is pre-eminently a disease of youth, frequently first showing itself at the inception of puberty, or shortly after, and lasting, with varying severity, for several years. In young adolescents there is little doubt that it is often connected with too frequent sexual excitement, more especially of an unnatural kind. In young women menstrual irregularities play a not unimportant rôle. In one case it may be a scanty or deferred menstruation; in another, a too frequent or profuse one, and in still another more or less dysmenorrhœa. In other cases again these functions may be performed in a comparatively normal manner, but constipation or dyspepsia is present, and seems to constitute the principal etiological factor.

Acne indurata is more common in older persons. In women it is most frequently due to menstrual or gastric trouble, while in men its origin must be sought in gastro-enteric or hepatic derangement, the latter not rarely due to excessive use of spirituous beverages.

Treatment of acne vulgaris.—The first point to be considered is the probable cause of the eruption, and the means best adapted to its removal. A detailed consideration of these will take us too much out of our way. The next point to be looked into is the general hygienic condition of the patient. If there is room for improvement in this respect it should certainly not be neglected. Fresh air, exercise, diet, etc., should be duly regulated, and any habits that are prejudicial to health should be corrected. Attention to the foregoing may involve the employment of tonics, neurotics, emmenagogues, etc. Among the first, cinchona and its derivatives are, I believe, rarely indicated, except when the condition calling for the tonic treatment is the result of excessive menstrual or seminal losses, or is dependent on malarial poisoning. Iron, if prescribed, should be given sparingly and for short periods only, for if given in excess and for too long a time is capable of producing anæmia, and is even credited with the power of exciting an acneform eruption (*vide*, p. 53). Nux vomica and strychnia are tonics, peptics, and neurotics, and may often be usefully employed; so also the bromide of potassium may prove useful as an anaphrodisiac and sexual sedative, but its special influence on the sebaceous glands should not be overlooked, and care should be taken that it does not do more harm than good. If menstruation be deficient, any of the well-known emmenagogues may be employed, the blue cohosh (*Caulophyllum thalictroides*) having given me great satisfaction in this connection. Functional dysmenorrhœa is sometimes promptly relieved by pulsatilla or viburnum opulus, and menorrhagia by ergot. The regulation of the bowels by laxatives, etc., when necessary, should be borne in mind. All this should be regarded as preliminary, and brings us to the direct treatment of the eruption, which treatment will be either internal or external—or, better, a combination of both.

The remedies specially interesting in connection with the direct internal treatment of acne vulgaris are arsenious acid, bromide of arsenic, sulphide of calcium, and sulphur. The action of these drugs is by no means the same, and the indications for their employment are far from being identical. While making this statement, it must be understood that the writer is not prepared to present their several indications with the precision that might be desired. Literature is almost silent on the subject, and personal experience (too often deceptive) is the writer's main guide to the differential selection of the drugs mentioned. Arsenious acid has appeared best adapted to those cases in which the papular element was the most prominent, the papules being indolent, not very painful, and slowly pursuing their course to resolution without changing to pustules. Sulphide of calcium, on the other hand, is best adapted to cases characterized by a plentiful development of sensitive and painful papules, rapidly becoming pustules, which pursue a somewh [illegible] rse. The greater the tendency to pustulation, the more [illegible] ide is indicated. The bromide of arsenic occupi [illegible] een arsenious acid and sulphide of calciu [illegible]
greater number of cases than the d [illegible]

always enjoyed a certain measure of repute in the treatment of acne, but I have rarely found it of service except in a few extremely indolent cases, in which doses of from five to fifteen grains, alone, or mixed with bitartrate of potassium, have appeared to excite a beneficial influence.

The external treatment of acne vulgaris should go hand in hand with the internal. Recollecting that the lesion of acne runs a definite course, the progress of lesion should be hastened as much as possible. An inflamed papule having appeared, it, on the one hand, remains a papule for a week or two, and then gradually undergoes resolution without suppuration, and gradually disappears—or it may change into a pustule, the pus appearing at its summit,—sometimes more deeply. After the pus is discharged, the lesion gradually disappears, leaving a slight macule which in turn fades away. In either case the duration of the lesion may be materially shortened. This may be accomplished by freely incising, or rather puncturing, each advancing lesion with a lancet point. The slight bleeding that follows should be encouraged by fomentations of *warm* water. This to be followed by applications of water as hot as it can be borne, and which should be repeated two or three times a day, each application lasting five or ten minutes. The patient is then directed to procure a proper lancet, one with a guarded point is preferable (Fig. 4), and to puncture every new lesion as it appears. As comedones frequently coexist with acne vulgaris, they should be next disposed of (see *Comedo*). This accomplished, various ointments and lotions are of service, the most useful of which, in my experience, are *Ungt. Hydrarg. Ammon.*, *Ungt. Sulphuris*, *Ungt. Sulphuris Iodidi* diluted, and lotions containing a little *Hydrarg. Chlor. Corros.* (gr. j.—ij. to the ounce), or sulphur. An admirable application is precipitated sulphur, intimately mixed with three or four times its weight of any simple toilet powder. All that is really needed is a mildly stimulating application, and one not strong enough to produce much irritation. The ointments, lotions, etc., should be applied at night and washed off the next morning with soap or quillaya.

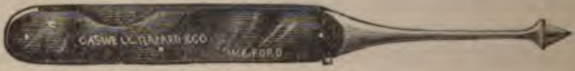

FIG. 4.—Acne lance.

The faradic current has been found by myself and by my friend, DR. SATTERLEE (**110**, 2 : 164), an excellent adjuvant in the treatment of Acne vulgaris. The positive pole is applied to the nape of the neck, and the negative to the affected parts. The applications to be continued for ten or fifteen minutes, and to be repeated every two or three days.

Treatment of acne indurata.—The preliminary treatment will be the same as in the other form. That is to say, the causes of the affection must be inquired into as minutely as possible. Hygiene and the general health of the patient should receive careful consideration, and all obstacles to a cure should be removed so far as practicable. The direct internal treatment is in the main the same as in the preceding variety. Arsenic and sulphide of calcium are to be used on the same indications as already laid down, but in addition valuable service is sometimes rendered by mercury, phosphorus, and the iodides of potassium and sulphur. This is especially the case when the eruption is subacute with large tubercles and much surrounding infiltration. The external treatment involves the employment of scarification and hot water, if the lesions exhibit an acute character. If subacute, actively irritant applications are more useful. Of these the *Sapo Viridis* is one of the most important. This should be applied every night to the affected parts until a considerable degree of irritation is produced—as much, in fact, as the patient can conveniently bear without too much suffering. When this limit is reached, the applications of the soap are discontinued, and emollients used until the artificial inflammation shall have subsided. When this has taken place it will be generally found that the original infiltration and induration is lessened. Another series of green-soap applications are then to be made in the same manner, and after subsidence of the irritation to be followed by another course, if necessary. When the whole or greater part of the infiltration disappears and the tubercles levelled down, as it were, lotions of sulphur, etc., will prove serviceable in combating the remaining hyperæmia. Instead of *Sapo Viridis*, ointments containing *Hydrarg. Bichlor.*, *Hydrarg. Biniod.*, *Potassii Iodid.*, *Sulphuris Iodid.*, etc., may be employed. The object sought in these applications is the substitution of an artificial inflammation which tends to a spontaneous subsidence, and usually results in a beneficial modification of the pre-existing lesions.

Hebra places little reliance on internal treatment, relying almost exclusively on external remedies. He says: "In the first place, everybody, and most of all a person affected with acne, should be careful to keep his skin scrupulously clean, and not only (as is usual) to wash the hands alone, but also the face, and when possible the back and chest as well, at least once a day, and that with soap. The operation is best undertaken before going to bed at night, and in the following manner: A piece of flannel should be dipped in lukewarm water and then rubbed with fluid glycerine soap or *Spiritus Saponatus Kalinus*, or any solid soap preferred, after dipping it also in water. The flannel thus impregnated with soap should be rubbed over the skin, and that briskly, since the mechanical pressure is of considerable service in removing the plugs of sebum which obstruct the follicles. The soap should then be washed off with water, and, to prevent the tension of the skin which may follow, either a little glycerine, cold cream, or any simple ointment should be applied, or, if this is not well borne, some earthy powder, such as pumice-stone, Venice talc, or asbestos. It is best to wash at night, because the redness of the skin, which is produced by the rubbing with flannel, takes some little time to disappear; and many patients dislike this in the earlier hours of the day. The application of oily preparations is also recommended as being agreeable to the patient's feelings.

"In cases which need something beyond mere washing with soap, this should be followed by the application of a sulphur paste by means of a camel's-hair brush.

"This should be left all night upon the skin, and washed off next morning; not with soap but with a glutinous lotion, obtained by pouring hot water over bruised almonds and used lukewarm. After this paste has been applied a few days in succession, slight reaction follows in the form of mild *Pityriasis rubra*; it must then be intermitted till this has disappeared, and meanwhile Wilson's zinc ointment may be used.*

"While this treatment is going on, the acne-nodules should be scarified in good time, before their contents become yellow and purulent. As soon as a red tubercle appears, it should be incised to the depth of one or two lines and allowed to bleed.

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* ℞. Ungt. Zinci Oxidi Benzoati............................℥ j.
Alcoholis..ʒ j.
M.

"The use of ordinary baths or, when the disorder attacks the face, of vapor- and shower-baths, will be of important service in assisting these measures.

"Another method of treatment is by sulphuretted sand-soap, or iodized sulphur-soap: a piece of one of these is moistened and rubbed into the skin until a lather is formed, which is allowed to remain all night, and only washed off next morning with bran-water.

"In using corrosive sublimate, one of its solutions should be applied once or twice a day with a camel's-hair brush or a piece of sponge, until either an eruption of vesicles follows, or simple desquamation. Then all treatment should be suspended, or Wilson's zinc ointment may be used. Mercurial plaster may be also applied during the night, followed by washing with soap in the morning" (**97**, Syd. Soc., ed. 2: 298).

WILSON (**77**, 596) says: "The treatment of acne must be adapted to the cause of the affection; in those cases in which a torpid action of the cutaneous system is evident, stimulating remedies must be employed, whereas in those which are dependent on congestion, stimulants would be injurious, and prolong the morbid action. In both cases the regimen should be regulated; it should be moderate and nutritious, all stimulants avoided. To this hygienic management, laxatives and acids, and tonics may be added, with a view to order the secretions and regulate the digestive functions. Whenever other general indications present themselves, they must be especially attended to; thus, in young women at the time of puberty, the state of the uterine functions must be ascertained, and at the critical period of life derivative measures may be employed with advantage. Whenever the indication is obviously congestive, bleeding may be had recourse to locally.

"In applying the local treatment, due regard should be had to the ordinary principles of surgery. When the pimple is congested and painful, it may be punctured, and the bleeding encouraged by water-dressing or poultice; and when pus or sebaceous substance is suspected to exist, embedded in the tubercle, a fine puncture, succeeded by a poultice, is especially indicated. When the local determination has somewhat subsided, stimulants may be employed; for this purpose a lotion containing sulphur sublimatum, two drachms; camphor, one drachm; and distilled water, four ounces, is often of service; or the hypochloride of sulphur ointment, or an ointment of ioduret of sulphur, in the proportion of ten grains to the ounce of elderflower ointment or simple cerate."

"In the simple, as well as in the other varieties of acne, when they present a chronic character, a solution of bichloride of mercury in emulsion of bitter almonds, or of the same salt in eau de cologne, in the proportion of a grain to the ounce, will be found of service. A solution of sulphur, in spirits of wine or brandy, has been recommended as a local application; but this merely acts upon the general principle of stimulation, and is inferior in every respect to the solution of the bichloride."

The following drugs may also be considered in connection with the treatment of acne:

For internal use.—*Acid. Nit.*, 9; *Belladonna*, 32; *Cich. Intyb.*, 42; *Glycerine*, 56; *Ol. Morrhuæ*, 78; and *Taraxacum*, 110.

For external use.—*Acid. Carbol.*, 6; *Aconite*, 12; *Antim. Chlor.*, 18; *Citr. Limon.*, 45; *Collodium*, 46; *Ferri Chlor.*, 55; *Ferri. Perox.*, 55;

Hydrarg. Cyan., 65; *Hydrarg. Nit.*, 65; *Mais Guasto*, 75; *Potassa*, 90; *Potas. Chlor.*, 92; and *Sodii Boras*, 106.

Certain purely mechanical processes have also been recommended in the treatment of acne, more particularly rubbing down the affected patches with fine sand, proposed by ELLINGER (**177**, '76, No. 45), and scraping away the lesions with the dermal curette, by HANS HEBRA (**177**, '75, No. 51), and WIGGLESWORTH (**115**, '76).

ALOPECIA.

SYN.: Defluvium capillorum.

Definition and description.—Alopecia may be described as the partial or complete falling of the hair from the scalp or other portions of the body. This loss of hair may be quite sudden, occupying a few weeks only; or, on the other hand, it may be exceedingly gradual, and several years may pass before any particular region, the scalp for instance, becomes absolutely bald.

Etiology.—Rapidly advancing alopecia is sometimes an accompaniment of syphilis, and will be particularly considered in connection with that disease. It also not unfrequently occurs during convalescence from the continued or eruptive fevers, after childbed, after erysipelas, and other acute diseases.

Chronic or slowly advancing alopecia may be the result of various debilitating causes, or may depend on pre-existing disease of the scalp, more particularly pityriasis (sometimes improperly termed *Seborrhœa sicca* *). It may also result from long-continued and imperfectly treated parasitic affections, as favus and trichophytosis. Lastly, it may be due to the ravages of age.

Diagnosis.—There is, of course, little or no difficulty attending the diagnosis of alopecia *per se;* the variety of alopecia, however, from an etiological point of view, is not always so self-evident. In syphilis the fall of the hair is usually quite rapid, and there may be either a uniform or generally diffused loss, or the hair may come out in patches, simulating an alopecia areata. The previous history and concomitant symptoms usually render a diagnosis easy.† Alopecia depending on recent acute disease is generally diffuse, the hair coming out quite readily when combed, but rarely becomes complete, as new hair usually commences to grow before the old hair is entirely gone.

The alopecia resulting from a long-continued favus is exceedingly characteristic, but difficult to describe. The presence of the favus crusts and the history of the disease will enable the diagnosis to be made without difficulty.

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* See 87, 193.

† A couple of years ago a physician called upon me with the request that I would prescribe for him the most approved "hair tonic" that I knew of, stating that for some weeks his hair had been coming out to a degree that greatly annoyed him, as he feared he would lose it all. He could imagine no cause for the trouble. A glance at the scalp was sufficient to direct the line of inquiry into the right channel, and it was ascertained that the patient had been an unconscious sufferer from syphilis for several months. Appropriate treatment and other circumstances amply verified the diagnosis.

Slowly advancing premature alopecia, the result of pre-existing pityriasis, is, as a rule, easily recognized; the presence of an abundant "dandruff," or, if this condition has ceased, the history of its previous occurrence, is usually sufficient to establish its importance as an etiological factor.

Senile alopecia, of course, presents no difficulties in diagnosis.

Prognosis.—In generalized syphilitic alopecia, and in that following acute illness, the prognosis is usually good. In alopecia dependent on pityriasis, the progress of the affection can usually be controlled, but if much advanced, the reacquirement of the original amount of hair is improbable. In senile alopecia the prognosis is unfavorable.

Treatment.—Appropriate treatment necessitates, in the first place, the removal of the cause, if possible; in the second, attention to the general hygiene; third, constitutional treatment when indicated, and fourth, local measures. The first indication cannot always be fulfilled, as for instance, in senile alopecia. In other etiological varieties, however, it can, as in alopecia due to existing pityriasis. This condition must be remedied before we can hope to accomplish much in the way of improving the growth of the hair. In alopecia the general hygiene of the patient should never be overlooked, especially in cases occurring after fevers and debilitating diseases. Constitutional treatment of a specific character is of course requisite in the variety dependent on syphilis. In other cases it involves the employment of measures calculated to improve the general health when necessary, and also the use of internal remedies capable of promoting the growth of the hair, if any such remedies can be found. To positively assert that there are drugs which, internally administered, are capable of promoting an increased growth of the hair, is more than the author feels warranted in doing. He, however, cannot refrain from expressing the belief that he has seen decided benefit follow the employment of preparations of arsenic, nux vomica, phosphorus, and cod-liver oil. How these drugs act, if in reality they are efficient, is a question rather difficult to answer. Possibly as nerve-stimulants they may expend their force where it is most needed, or possibly as hæmatogenics they may act by improving the character of circulating fluid, and thus indirectly prove of service. Whether internal treatment is appreciably beneficial in alopecia, except in the syphilitic form, may, we think, be still considered an open question. Not so, however, with local treatment. On this our expectations must mainly depend.

One of the first points to be considered is the desirability of cutting the remaining hair close, or of shaving it off altogether. There is very little doubt that rapidity of growth is promoted by clipping, and that a thicker and stronger growth follows frequent shaving, and the only question to be decided is whether the inconvenience and discomfort that arises from a shaven scalp are not greater evils than those under which the patient is already laboring. In deciding this, each case must be judged by itself. In children it matters little whether the hair be shaved or not, unless they are of a particularly sensitive disposition and likely to be annoyed by the remarks of school-fellows and playmates. With ladies, and especially young ladies just entering society, a proposition to shave the scalp will meet with much disfavor, and should not be urged if there is a reasonable prospect of recovery without it. If shaving is decided on, it should be repeated every three or four days for several weeks or even longer, and until there appears to be a manifest improvement in the thickness of the growth, and in the strength of the individual hairs, it being understood that appropriate local treatment is pursued at the same time. If, however, shaving is omitted, local applications of a stimulating nature will be the main dependence. These will vary in activity according to the susceptibility of the skin and to the effect produced. It is best to commence with the milder class of applications. Sometimes they alone will suffice, and may even do better than stronger ones.

Among the former, are infusion of ordinary garden sage (*Salvia Officinalis*, ℥ j.; *Aq. Bull.* Oj.) may be mentioned. The author has employed this to advantage in a number of cases of incipient alopecia, the first effect being to check the falling out of the hair, and long-continued use is sometimes followed by a renewed growth of stronger hair. The applications should be made at least every other night and continued for several weeks. If at the end of a month or six weeks no benefit appears to accrue, it is hardly worth while to continue it longer. A stronger application may then be used, as a tincture of sage, of rosemary (*Rosmarinus Officinalis*), or of nux vomica mixed with castor-oil.

A still stronger, and perhaps the most frequently employed scalp stimulant, is the tincture of cantharides more or less diluted with alcohol, or oil, or added to any of the ordinary pomades that the patient fancies. The proportion of the tincture should not at first exceed one part to twenty of excipient, to be increased later if thought desirable.

Another stimulant specially recommended by WILSON is ammonia. He prescribes "a lotion composed of strong liquor ammonia, almond oil, and chloroform, of each one part, diluted with five parts of spirits of wine or spirits of rosemary, and made pleasant as to fragrancy by the addition of a drachm of the essential oil of lemons. The instructions for the use of this lotion, are: that it should be sponged upon the skin of the head after thorough friction with the hair-brush" (80, 164).

When the scalp is preternaturally dry, oily applications and excipients for more active agents should be employed. Among the oils, petroleum enjoys a certain reputation, not altogether unmerited, as a hair stimulant. The crude oil may be employed, or, preferably, some one of its more refined products. The oleates of mercury and of strychnia may also prove of service under the same conditions. When, however, the scalp is unusually oily from excess of sebaceous secretion, the author usually directs that it shall be occasionally washed with a fluid-extract of soap bark (*Quillaya Saponaria*), to which a little water has been added. This forms a lather which both cleanses the scalp and acts as a stimulant.

In the treatment of alopecia, which is usually tedious and often without result, a change in the character of the application should occasionally be made. After a prolonged use of any given lotion, the scalp seems to become habituated to it, and progress stops, to go on again under the use of quite a different preparation.

The treatment of alopecia dependent on pityriasis or the *alopecia furfuracea* of HEBRA, is thus described in the work of this author.

In the first place, the accumulation of scales on the scalp are softened by means of oil, and removed by washing. A sufficient quantity of pure olive oil is carefully rubbed into the scalp, where covered with scales, by means of a small piece of sponge, or a piece of flannel, and the head is then wrapped up in a hood of flannel. This plan is most conveniently carried out at night. If the scales are very thick and dry, the oil must be rubbed in energetically every two or three hours. After this procedure has been carried out for twelve or twenty-four hours, the scales become so brittle that they may be broken up and removed with the finger.

This is the time for washing the head. For this purpose any of the better kinds of soap may be made use of. A solution of soap in spirits answers best of all, because both the soap and the alcohol dissolve the fat, and the latter also slightly stimulates the sebaceous glands, and therefore acts as a direct method of cure as well as a merely preparatory one. The *Spiritus Saponatus Kalinus* is the most effective. A sufficient quantity of the alcoholic solution of soap is sprinkled on a piece of flannel, or on a coarse-meshed sponge, and the scalp is then washed with it. After the scales and crust have been everywhere thoroughly removed from the scalp, the hairs are rinsed with cold or lukewarm water until it flows away quite free from admixture with soap. The inunction with oil only requires to be repeated during the first few days, as long as the sebaceous crusts are reproduced in excessive quantity and density. The process of washing, however, must be persevered in day by day, most conveniently at night, in men as well as in women. After the completion of the washing, the hair must be combed, and by this means some scales still remaining may be removed. The hair is then left quite unrestrained, that is, in women it is not plaited nor arranged in any way. It must remain uncovered, in order that it may dry thoroughly.

For the first few days the patients lose a very large quantity of hair, much to their dismay, during the washing and combing, so that they appear much more bald than they did before commencing the treatment. It is necessary to call the patient's attention, beforehand, to this unavoidable but very easily explained circumstance. There are many hairs, for instance, whose roots are already atrophied, and whose root-sheaths are already loosed, which adhere but slightly to their follicles. These, which are quite ready to fall out, are pulled out by the washing, and they are accompanied by many hairs which, though set free from their follicles, are retained by masses of sebum. The loss, therefore, only affects hairs which would otherwise, though not at the precise time, have been shed.

At a later stage, instead of the wash of the alcoholic solution of soap, may be substituted one containing brandy, or an alcoholic one containing tannin, veratria, or some other stimulating ingredient. Still later, fatty excipients are usually required.

Besides the drugs already mentioned, attention is directed to *Adiantum*, 13; *Lappa*, 73; *Ruta muriaria*, 101; and *Verbena*, 113.

ALOPECIA AREATA.

SYN.: Alopecia circumscripta; Area Celsi; Porrigo decalvans; Tinea decalvans.

Definition and description.—Alopecia areata is an affection characterized by the loss of hair from the scalp or other parts. The affection commences by small circumscribed, usually round patches, which gradually enlarge, until contiguous ones unite. The parts most frequently affected are the scalp and region of the head, though all parts of the body may be affected, and all of the hair be shed.

Diagnosis.—The only affections with which alopecia areata is liable to be confounded, are trichophytosis capitis and syphilis. In the former the apparently bare places are in reality found to be covered with a short, hairy stubble, from $\frac{1}{16}$ inch to $\frac{1}{8}$ inch in length, plentifully interspersed with fine farinaceous scales. In alopecia areata, on the other hand, the patch is absolutely bald, sometimes slightly elevated and injected, more frequently depressed and pale, and without scales. The bald patch itself is surrounded by apparently healthy hair. In syphilis the loss of hair is usually diffuse and rapid, more rarely intermingled with circumscribed patches. The scalp is sometimes slightly injected, but not elevated. The concomitant symptoms should enable the diagnosis to be made without difficulty.

Ætiology.—The causes of alopecia areata are not definitely known. A few, chiefly French authors, believe that it is due to a fungus, which they call the *Microsporon Audouini*, and hence classify the affection with the *Phytoses*, or diseases depending on vegetable parasites. The majority of observers do not accept this view, but believe that the affection is due to a circumscribed asthenia, depending on defective innervation. For further discussion of this question see 87, 289.

Treatment.—The methods of cure recommended by writers are somewhat biassed by their views as to the etiology of the affection. The French usually recommend that the bald patch and a little of the surrounding hair be shaved with a razor two or three times a week, and that an ointment of turpeth mineral (*Hydrargyri Sulphas Flava*), about 1 to 30, be rubbed into the bald patch daily. Others, who regard the disease as a localized neurasthenia, apply the strongest stimulants. The author has usually adopted the following plan: If the patches have not yet acquired a very large size, the marginal hairs for $\frac{1}{16}$ inch to $\frac{1}{8}$ inch are carefully epilated. This done, the further treatment will depend on whether the patch is apparently congested and slightly elevated, or whether depressed and pale. If in the former case, I have found a local application of nux vomica of great service. From ʒ ss. to ʒ j. of the fluid extract to an ounce of simple or rose-water ointment, may be thoroughly rubbed into the affected parts once or twice a day. Another convenient application consists of equal parts of tincture of nux vomica and castor-oil, or a two per cent. solution of strychnia in oleic acid.

On the other hand, if the scalp is pale and depressed, an active stimulant is required, and for this purpose I am in the habit of using the ordinary *Collodium cum Cantharide* of the pharmacopœia. This being applied sometimes blisters, but quite as frequently fails to. If it blisters, the next dressing will be a little simple cerate until the blister has healed. This is followed by a mild stimulating application, as castor-oil with a little tincture of cantharides or spirits of rosemary, or a lotion or ointment of corrosive sublimate, one to two grains to the ounce, or the turpeth ointment above mentioned. If, at the end of two weeks or so, there is no sign of new hair, the cantharidal collodion is again applied. When new hair begins to appear, it is usually quite fine and delicate, and of a much lighter color than normal. As soon as it shows itself the razor may be brought into requisition, and used two or three times a week, mild stimulants to the scalp being continued. In addition to the drugs mentioned, I have sometimes used croton-oil, cardol, ammonia, and other substances having an analogous action.

Those who do not regard the affection as parasitic, are in the habit of employing internal in conjunction with local treatment. Personally, I use, and I think with advantage, arsenic, nux vomica, iron, quinia, phosphorus, and sulphur. Occasionally cod-liver oil is indicated in children, more rarely in adults. In all cases generous diet and proper hygienic surroundings should be secured.

When the affection has already gained much headway, and the greater part of the scalp is denuded, extensive blistering is out of the question, or if employed at all, portions from an inch to an inch and a half square should be treated successively. Patients in this condition are often disposed to wear a wig or a cap. This should be discouraged as much as possible, and free exposure of the scalp to the air and light insisted on. In summer exposure to the direct rays of the sun is of decided service, the period of exposure of course depending on the ability of the patient to endure it without the induction of headache or other disagreeable symptoms.

As previously stated, the affection sometimes progresses until universal alopecia results. This condition, however, is rare and in general unnecessary. The writer does not recall a case treated after the manner described in which the advance of the disease was not stopped, and in the very great majority of cases the hair can be restored to its normal condition.

HEBRA recommends the application of alcoholic solutions of the various essential oils, veratria, tincture of veratrum, aconite, cantharides, capsicum, etc. Although considering the affection to be a trophoneurosis, he says nothing concerning constitutional treatment.

WILSON's favorite application is ammonia mixed with camphor and chloroform. He states that the "constitutional treatment should consist in the adjustment and regulation of the functions of digestion and assimilation, and where no other special conditions are to be fulfilled, the adoption of a tonic regimen, and the administration of tonic remedies. Of these last arsenic bears the palm, and may be advantageously prescribed in doses of two to four minims" (of Fowler's sol.) "three times a day, directly after food, and in any convenient vehicle."

ANGIOMA.

SYN.: Telangiectasis.

Definition and description.—This affection consists in the development of a small congeries of blood-vessels in the superficial portion of the derma. They are small in size, usually not more than a sixteenth of an inch in diameter, and may be quite numerously distributed over the surface. They are rarely met with before puberty. Their bright red color and slight prominence immediately attract attention.

Etiology.—The causes which induce the development of angiomata are unknown.

Therapeutics.—These little growths are readily removed by the application of nitric acid, chloride of zinc, or any of the stronger caustics; or electrolysis, or some form of actual cautery may be employed for the purpose.

HEBRA recommends that they be incised with a fine scalpel, and a dilute solution of perchloride of iron, or a strong solution of nitrate of silver immediately applied.

The author usually employs the fine point of a Paquelin cautery.

ANIDROSIS.

Etiology.—Deficient perspiration is a symptom common to a number of cutaneous affections, that is to say, accompanies various lesions. It sometimes, though rarely, is a prominent morbid condition without any other coexisting lesion of the skin. It may be due to congenital defective development of the sudoriparous glands, or to functional derangement of normal glands, or to other causes. For instance, examination of the palmar surfaces of the fingers with a lens will enable the observer to readily detect the situation of the mouths of the sweat-ducts, in a normal condition of the skin. They appear as numerous little circular depressions on the summit of the papillary ridges. In ichthyosis, on the other hand, they appear to be less numerous and smaller in size, and many of them fail to exhibit any depression, and some of them appear even a little elevated, and apparently blocked up and impervious. Again, if the palm of a normal hand, after having been thoroughly dried, be exposed to the direct rays of a hot sun, in a few minutes little droplets of fluid will be seen (with a lens) issuing from the pores. If the palm of an ichthyotic patient be treated in the same manner, it will be found that only a comparatively small number of pores give exit to fluid. In other words, a certain proportion of them are inactive. It is probable that this condition prevails to a greater or less extent over the whole surface of the body, as ichthyotics are proverbially anidrotic. In this case, there is a congenital defect of development in the sudoriparous system. In the affection known to English writers by the name of xeroderma, it is probable that the same condition prevails to a less extent. On the other hand, patients suffering with eczema, psoriasis, and some other cutaneous affections, do not, as a rule, sweat as freely as persons in the full enjoyment of health. Here there is no evidence to show that the sweat-glands themselves are defective, and the deficient secretion may be simply due to functional inactivity.

Therapeutics.—If for any reason it is desirable to increase the secretion of perspiration, it may be readily accomplished by the use of almost any of the commonly employed diaphoretics. The most powerful of these agents is jaborandi, the full diaphoretic dose of which for an adult is a drachm of the fluid extract, or half a grain of some salt of its alkaloid pilocarpia. This produces free diaphoresis, commencing in ten or fifteen minutes and lasting for two or three hours or longer. It possesses the inconvenience of producing at the same time free salivation, a circumstance of which the patient should be informed. When practicable the most agreeable mode of obtaining free diaphoresis is by the aid of the Turkish or hot-air bath.

ANTHRAX.

SYN.: Carbuncle.

Definition.—A circumscribed inflammatory condition of the skin and subjacent connective tissue, characterized by heat, redness, pain, and swelling, and termination in destruction and slough of the tissues involved. This disease must not be mistaken for a disease of cattle, sometimes called by the same name and transmissible to the human subject.

Ætiology.—The exciting causes of anthrax are not fully understood, but it appears most frequently in men of enfeebled constitution and past middle life. The disease is not infrequently fatal.

Treatment.—The general hygiene of the patient demands the first attention. Diet that shall be nourishing without making too great demands on the digestive organs, is of the first importance. Milk, cream, eggs, meat-juices, oysters, tender meats, together with a proper and judicious mingling of farinaceous foods, should be provided. As the disease usually lasts for several weeks, sometimes months, and in its course, especially when prolonged or attended with much suppuration, makes severe demands on the reparative powers of the system, intelligent supervision of the patient's food is of the utmost consequence. Variety should be provided, lest the too frequent repetition of the same articles pall on the appetite, rarely very good, and tend to induce disgust for all food, at least in proper quantities. If the patient's appetite can be maintained, and a reasonable quantity of nutritious food is daily assimilated, this alone may turn the scale in the patient's favor, and prevent what might otherwise be a fatal issue. Stimulants will, in all probability, be demanded. As the affection not infrequently occurs in those who are accustomed to indulge more or less freely in spirituous beverages, the patient's habits should be carefully considered in fixing the daily quantum to be consumed. This general rule, however, may be safely followed: Do not give stimulants, other than the patient is accustomed to, until there are clear indications for their use, and never give more than is necessary. As the disease progresses there will be increased need of them, and if commenced too soon or in too large quantity, the subsequent increase that will be required may prove a matter of serious embarrassment. As to the amount to be used no definite rule can be given. In some cases, the equivalent of an ounce or two of brandy in twenty-four hours may be all that is requisite, while in others six times these quantities may be necessary to avert a fatal depression. In some a single glass of wine at meal-time gives a sufficient encouragement to the stomach to induce it to do its share toward maintaining the patient's nutrition; in others brandy or some other distilled spirit must be given at regular intervals in order to sustain a feeble pulse and flagging heart.

If the case be at all severe, the patient will probably be confined to his bed, or at least his room. Ventilation, therefore, and a constant supply of fresh air should be provided, at the same time draughts and improper exposure should of course be avoided. A little ingenuity, with the aid, perhaps, of some one of the various patent ventilators in the market, will readily secure all that is necessary in most cases. If, however, the carbuncle be a large one and open, and if the exposed surfaces freely secrete pus, and especially if gangrenous sloughs still retain their attachments, additional purifying devices will be required. A dish of chloride of lime in the corner, spraying the air with a dilute solution of permanganate of potassium, of carbolic acid, of thymol and the like, will tend to promote the patient's recovery, and add much to his comfort and to that of his attendants.

The *constitutional* treatment of anthrax involves the judicious use of quinine, iron, the mineral acids, strychnia, phosphorus, the hypophosphites, and possibly the hyposulphites. Quite recently the sulphide of calcium has been recommended, on the ground that as it is useful in furuncle, it should be, *pro tanto*, serviceable in carbuncle. None of the agents mentioned should be used to excess, nor commenced too soon. If the suppuration is excessive, either before the carbuncle is open or afterward, the calcium sulphide will certainly control it in a measure, but as this agent is so apt to cause disturbance of the stomach, which should at all hazards be maintained in good order, it may not always be desirable to employ it. The pain and nervous irritability that often accompany carbuncle are best relieved by opium, or one of its derivatives, a dose at night being, perhaps, all that will be necessary. It should be given in suppository or by hypodermic injection rather than by the mouth.

The *local* treatment of anthrax has given rise to much discussion, and surgeons are by no means agreed as to the means to be adopted. Some claim that if the carbuncle be seen early its spread may be limited by active compression; others, that when fluid is manifestly present it should be evacuated as soon as possible by a number of small openings; others again maintain the old practice of extensive incisions. A recently issued "Manual of Operative Surgery" declares that "the treatment of all forms of carbuncle must be very energetic to prevent the spread of the disease; numerous incisions should be made early to permit the escape of the decomposed putrid tissues and fluids ; they should be crucial in form through the whole thickness of the cutis and extending to the healthy skin," etc. *Per contra*, SIR JAMES PAGET* lends the weight of his influence against this practice. He says: "I have not followed this method very often, but I have followed it quite often enough to be sure that it does not produce the effects which are commonly assigned to it. It is commonly said that if you will thus make crucial incisions you will prevent its spreading. If you can find a carbuncle two or three days old, and cut it right across in both directions I think it not unlikely that you will prevent its spreading. But even therein is a fallacy; for there is no sign by which, on looking at a commencing carbuncle, you can tell whether it will spread or not, whether it will have a diameter of an inch or of three, six, or ten inches. . . . After this time of three or four days I have seen a sufficient number of carbuncles thus divided, and have divided enough for myself, to say that it will not hinder the spreading. I have seen carbuncles spread in as large a proportion of cases after incisions as in cases that have not been incised. . . . Then it is said that carbuncles are relieved of their pain if they are thus freely cut. Here again is only a partial truth. A carbuncle of two or three days' standing, which is hard, tense, and brawny, is very painful; and cutting it will relieve, in many cases, a considerable portion of the pain. But after this, when the carbuncle begins to soften, and when the pustules begin to form upon the surface, and pus in its interior, it becomes less painful of its own accord, and without incisions. Thus there are two distinct stages of carbuncle in reference to the pain; the early stage, when it is hard and still spreading, and is generally intensely painful, and the later stage, in which that pain nearly or quite ceases. A carbuncle divided in the first stage, in the first two or three days of its existence, may be relieved of some of its pain; if divided in the later stage, what little pain may exist is altogether unaffected by the cutting. And even cut as you may, you cannot always cure the extreme pain that a carbuncle sometimes has, even to its later time. . . . The third point is stated thus: that by the incision of carbuncles you accelerate their healing, giving facility for the exit of sloughs. But herein is the greatest fallacy of all. When the cutting of carbuncles was more customary in this hospital than it is now, when I did not cut them, and some of my colleagues did, I used to be able to compare the progress of cases cut and of cases uncut, and time after time it was evident that the cases uncut healed more readily than those cut. . . . It by no means always follows that the whole carbuncle or its whole base sloughs. Carbuncles, if not divided, not unfrequently suppurate only about their centres, and slough only in their central parts, and the borders clear up by the softening and dispersion of the inflammatory products in them. In every case of this kind you save greatly the amount of healing which has to be gone through. Nay, in some cases, carbuncles completely abort.

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* Clinical Lectures and Essays. London, 1875.

"The incisions that I have been speaking of are those made in the old plan—crucial incisions. Another method which I have occasionally tried, but of which I can only state the same general results, is that of subcutaneous incision. This has been supposed to have the same general effect as the other; and I think that the same general conclusions may be drawn respecting it, that it is a measure unnecessary in the treatment of carbuncle, and that it retards rather than hastens the healing. When I speak thus of the incision of carbuncles, however, I do not mean to say that there is no condition of carbuncle in which an incision may be useful. Sometimes a carbuncle sloughs in its central part, with one continuous slough of integument holding in a quantity of pus. In that case you should cut through the slough, or through any adjacent part of the carbuncle to let out the pus, as you would open an ordinary abscess.

"If you ask why you may not cut a carbuncle though it may do no good, I reply that you should never be actively useless, and that there are some cases in which the cutting does considerable harm. Carbuncles, for the most part, occur in persons broken down in health, exhausted by overwork, or by bad food, or in deteriorated general health, as sometimes in diabetes or albuminuria ; and in all these persons it is a good general rule to save the blood they need for healing. The loss of blood from the carbuncle, itself would not be considerable ; the hard substance of the carbuncle when cut into, does not bleed, or bleeds but little. But to carry out the incision perfectly, you have to cut into the adjacent healthy texture, and this sometimes bleeds very profusely, so as to lead to all the distress and pain of plugging the wound with this or that substance, to arrest the blood."

This very forcible, yet temperate, protest of SIR JAMES PAGET, against the still prevalent free incision plan, should, we think, warn the surgeon against the too free use of the knife in carbuncle. The method of treatment recommended by PAGET is the application of simple lead plaster or resin ointment, and covering this with a poultice. After an opening occurs, or is made at the hands of the surgeon, the sloughs should be removed as they loosen, and the cavity washed out once or twice a day with a weak carbolic lotion, or some similar fluid. In the advancing stages the writer has used, with apparent advantage, both the belladonna and stramonium ointments. The application of either of these, however, to an extensive surface should be carefully watched, in order to guard against the constitutional effects of the danger.

BROMIDROSIS.

Syn.: Osmidrosis; Ephidrosis olena.

Definition and description.—Bromidrosis is an affection that consists in the secretion of perspiration characterized by a disagreeable odor. This offensive secretion may be generally diffused over the surface or confined to particular parts, more particularly the axillæ, feet, and genital region. It may or may not be accompanied with hypersecretion of sweat.

Diagnosis.—This affords no difficulty except to those suffering from anosmia.

Ætiology.—It is well known that the odor of certain drugs may be perceived in the sweat, and the salts of tellurium, in particular, when ingested, are said to taint the secretion with an exceedingly unpleasant and persistent garlicky odor. Certain grave diseases, also modify the effluvia of the body, as small-pox, etc. The causes of idiopathic bromidrosis, however, are exceedingly obscure, as in some cases the perspiratory secretion appears to be odorless when first discharged, but to rapidly undergo decomposition, resulting in the development of certain foul-smelling products, reminding one of the rank odor that is peculiar to the goat. If, with this tendency to rapid decomposition, there is at the same time a hypersecretion of sweat, the trouble is intensified.

Treatment.—In those cases where the affection is due to the ingestion of drugs, and those in which it is dependent on certain febrile states, it is clear that the disagreeable symptoms will disappear when the active cause is removed. In cases, on the other hand, which, for lack of a better name we call idiopathic, the question of cure, or at least of palliation, deserves careful consideration. Local bromidrosis, as of the axillæ or feet, sometimes occurs in those who otherwise appear to be in perfect health; but, in most cases that I have observed, it has been accompanied with deterioration of the health, and in women with menstrual disorders. At the outset it may be stated that there are no drugs known to the writer that are capable of directly combating the affection, that is to say, of preventing the secretion of mal-odorous sweat, or of so modifying it that it shall not undergo too rapid decomposition. In the otherwise healthy, therefore, there are no indications for internal treatment; but in others, effort should be made, based on the special indications present in each case, to raise the general health to a normal standard. To this end tonics, neurotics, and hematics may be required, and cod-liver-oil, cinchona, nux vomica, phosphorus, iron, manganese, and arsenic should be borne in mind.

The *local* treatment of bromidrosis, though far from satisfactory, is, however, more promising than the internal. The method of **Hebra**, to be described in connection with hyperidrosis, is said to give excellent results, though somewhat limited in its application. The author has, in several cases, used to advantage a preparation composed of freshly prepared silicic hydrate and rose-water ointment, in the preparation of one part of the former to nine parts of the latter. This is to be rubbed into the affected parts night and morning, the surface being thoroughly cleansed with soap and water before the application of fresh ointment. In both cases, very decided amelioration occurred within a month. In cases where a radical cure cannot or is not obtained, much may still be done to palliate the inconveniences arising from this disagreeable affection. To this end cleanliness is of the first importance. Ablution, if sufficiently frequent, will of course wash away the offensive secretion as fast as it forms. With many persons, however, it is impracticable to wash the feet or axillæ more frequently than twice a day, and this is sometimes insufficient to attain the end desired. It will then be necessary to employ, in addition, some one of the numerous deodorizers or disinfectants, as carbolic acid, thymol, chloral, etc., or to directly mask the bad odor by the use of some powerful perfume. These may be advantageously combined with absorbent and astringent powders.

WILSON (77, 550) says that he has several times succeeded in relieving his patients of this distressing malady, by a plan of treatment directed to regulate the secretions and active functions of the body. In one case, where general means had failed, tannin effected a perfect cure. Locally, the chloride of lime lotion, or a solution of permanganate of potash, will be found of service.

The treatment above given is intended to apply mainly to a localized bromidrosis, as I have never met with generalized forms of the affection except as the result of manifest uncleanness and persistent neglect of soap and water, so frequent in the lower classes. I have, however, encountered two cases of

BROMIDROSIPHOBIA.

Some years ago, two gentlemen, both within the same month, requested me to relieve them of a generalized bromidrosis from which they said they suffered. They stated that they constantly perceived offensive emanations from their bodies, which greatly interfered with their personal comfort and prevented them from mingling in society. I could not, in either case, ascertain that there was the slightest ground for complaint, and in one of them I became satisfied that the odor complained of was purely subjective and referable to perverted sensitiveness of the olfactory organs, the patient being unable to properly differentiate well-known and distinctive odors, a condition analagous, I suppose, to that known as color-blindness, and to which the name of dysosmia might, with propriety, be applied.

CALLOSITAS.

SYN.: Callus; Tyloma; Tylosis.

Definition and description.—The name Callositas is usually employed to designate circumscribed, elevated, and thickened patches of somewhat horn-like appearance and dense stricture seated *upon* the skin.*

Most callosities arise from frequent, intermittent, but severe mechanical pressure upon the skin, and are met with especially in persons following trades and occupations which involve the use of various tools. Shoemakers, tailors, workers in metals, etc., exhibit callosities so characteristic as to their location and form that the determination of the patient's occupation can sometimes be made by mere inspection of the affected parts. VERNOIS† has devoted some attention to this point, and gives a list of situations in which callosities are met with among French workmen of different trades.

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* A corn or *clavus* penetrates or is *imbedded* in the skin.

† De la main des ouvriers et des artisans, au point de vue de l'hygiène et de la médecine légale. Paris, 1862.

Occasionally callosities or patches, which cannot be distinguished from those of mechanical origin, arise idiopathically and without apparent cause.

The *diagnosis* of callositas presents no difficulties.

The *prognosis* will depend, as a rule, on the possibility of removing the exciting cause. Generally, if the cause which produced them ceases to act, they sooner or later disappear. In the idiopathic form, however, the prognosis is very uncertain.

Treatment.—Callosities, as a rule, produce very little inconvenience. In many cases they serve a useful function in preserving the deeper layers of the skin from injury, just as a hypertrophied heart serves in part to remedy the evils that result from certain valvular lesions. Under these circumstances treatment is of course uncalled for. Sometimes, however, callosities attain such development and extension that they interfere with the functions of the organs (the hands, for instance) on which they are situated, and relief is desirable. This may usually be afforded without difficulty. If the callosities are sufficiently horn-like and dense, they may be removed with a file or sand-paper. If less firm, may be shaved off with a sharp penknife, or very conveniently with a well made and properly tempered instrument of the form much used by chiropodists (Fig. 5).

FIG. 5.—Corn-knife (one-half size), used by chiropodists.

Instead of mechanical means chemical ones may be employed, either alkalies, preferably potassa, or acids, preferably nitric or acetic, being made use of.

CHLOASMA.

SYN.: Macula gravidarum; Macula uterina; Macula hepatica.

Definition and description.—Chloasma is a designation which has been quite loosely applied, and by many writers has been made to embrace several distinct affections—to include, in fact, all brownish or yellowish brown discolorations, larger than freckles, by whatever cause produced. Some, on the other hand, confine the term to parasitic discoloration (Chromophytosis) while others, including **HEBRA** (135, 1: 77) exclude the parasitic affection but embrace both cases that arise from external and mechanical causes, and those that are symptomatic of certain internal conditions and diseases, speaking of the former class of cases under the name of *idiopathic chloasma*, and the latter as *symptomatic chloasma*. The writer, however, prefers to restrict the name *chloasma* to certain discolorations of the skin of internal origin, and assigns the name *melasma* to cases of non-parasitic cutaneous discoloration due to external agencies.

Under these restrictions chloasma may be defined as a diffuse brownish discoloration of the skin, usually located on the forehead and cheeks. Of this two varieties may be admitted. The first occurs, according to **LOMBROSO** (131, 4: 17), in both sexes, though more frequent in males, as a result of mental alienation; the second, the more common form, is supposed to depend on some disturbance of the uterine function, and is, of course, exclusively met with in women.

Course.—Chloasma may arise during the period of pregnancy, and gradually increase as this condition advances. After delivery it usually diminishes and may entirely disappear, or it may remain as a marked disfigurement for a considerable period, if not for life. To this form the title *macula gravidarum* is sometimes given. Chloasma may also develop independently of pregnancy as a symptom or sign of uterine disease, and then receives the name of *chloasma uterinum.* When arising under these circumstances it is likely to be present as long as the uterine irritation remains, and sometimes persists after the exciting cause has apparently ceased to be active.

Diagnosis.—The diagnosis of chloasma presents little difficulty. The band-like discoloration on the forehead and the similar patches over the malar bones and neighboring integument are characteristic, the only other pigmentary lesion of these parts, at all resembling it, being the tanning which comes from frequent exposure to the sun. We can hardly conceive that any one can mistake the latter condition for the former. Parasitic discoloration (chromophytosis) does not invade the face, though occasionally seen upon the neck.

Prognosis.—The prognosis of chloasma is uncertain. Some cases are permanently relieved by treatment, while others relapse continually, even after the best directed efforts for their relief. The affection sometimes disappears spontaneously after the menopause.

Treatment.—In true chloasma of uterine origin it is probable that the seat of the discoloration is extremely superficial and located among the cells of the stratum corneum, and not in the deep cells of the stratum Malpighii.* We may therefore hope, by removing the horny layer, to remove with it the abnormal pigmentary deposit, or, at least, a portion, and by the termination of pregnancy, or relief of the uterine disorder, to prevent its reformation.

Before attempting the local treatment of chloasma an effort should be made to ascertain its cause. If pregnancy be present it is hardly worth while to attempt any treatment until gestation is over. If uterine disease be the *fons et origo* of the trouble this must, of course, receive attention if any permanent benefit is hoped for. Having considered the etiological factors, the question of topical applications is then to be considered. The principal indication is to procure an exfoliation of the stratum corneum, under the expectation that the newly formed horny layer will be free from pigmentary deposit. There are quite a number of agents capable of destroying the superficial layers of the epidermis, and causing their exfoliation, as cantharides, mustard, iodine, and corrosive sublimate, and any of them might be used for the purpose, were it not that some of them are very apt to produce a melasmic condition that may last longer and prove more disfiguring than the original affection. Mustard is especially objectionable on this account. Of the epidermicides mentioned, corrosive sublimate is to be preferred as the least likely to produce these disagreeable sequelæ. It should be used as a lotion of the strength of three to five grains to the ounce, applied two or three times a day until the stratum corneum loosens. This may then be rubbed off with a damp towel, and is replaced by epidermis less pigmented than before, or perhaps altogether normal. If necessary, the applications may be repeated, and the new horny layer removed by the same means. Instead of the foregoing, tincture of iodine, iodized glycerine, sulphur ointment, or sapo viridis may be employed as recommended by KAPOSI (**198**, 505).

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* That this is sometimes the case I have satisfied myself by microscopical examination, but whether it is always so I do not know.

In addition, *Sodii Boras*, 106; *Veratrum Album*, 113; and *Veratroidia*, 113, may be considered.

CHROMOPHYTOSIS.

SYN.: Pityriasis versicolor; Phytosis versicolor; Tinea versicolor.

Definition and description.—Chromophytosis is an affection of the skin characterized by the appearance of superficial yellowish brown macules or patches on the upper part of the body—most frequently met with on the chest. It commences by the appearance of macules, very slightly, if at all elevated above the surface of the skin, and covered with barely perceptible scales. It usually begins upon the chest, extends gradually over the greater part of this region, mounts upon the neck, and descends to the abdomen. It may also stretch around to the back and cover this region. It never invades the face, and seldom, if ever, the limbs. The eruption may consist of a few large patches, with very frequently a large number of smaller ones upon the outskirts, or it may be composed almost entirely of macules from the size of a pea to that of a dollar. The patches are sometimes slightly scaly. The progress of the affection is slow, so that months and even years may elapse before it becomes generalized over the trunk. The affection occurs more particularly in persons who are out of health, and not unfrequently appears during the course of phthisis and syphilis. It is most likely to be met with in those who are warmly clad and wear flannel next the chest, and who, at the same time, are negligent in matters of cleanliness. It rarely, if ever, occurs in those who make a practice of bathing daily. The affection is believed to be contagious, but I have never been able to trace a case to this cause.

Course.—The affection steadily progresses and may last for years, if untreated. Whether it ever disappears spontaneously I do not know; this termination, however, is probable in some cases.

Diagnosis.—Although the appearance of the eruption is so characteristic, I have known frequent errors in diagnosis to have been made. In the first place, if the affection occurs in a person known to be syphilitic, it may itself be incorrectly considered a manifestation of that disease. Secondly, it is sometimes diagnosticated as a syphilitic eruption, even in the absence of all other symptoms of syphilis. This is an unpardonable blunder. Its absence from the face, and confinement to the trunk and neck excludes chloasma, which latter is found upon the face, but not upon the trunk. The neck alone is a doubtful region, may be the seat of either chloasma, chromophytosis, or a pigmentary syphilide, and consequently some difficulty may arise. As a rule, however, the aspect and general features of the discoloration, together with the history and circumstances of the case, permit a diagnosis to be readily made. As a last resort, the microscope may be employed to elucidate the matter.

Prognosis.—So far as the eruption is concerned, the prognosis is favorable. The affection can, by proper treatment, always be cured. Despite this fact, it is not uncommon to meet with patients who have had the disease for years, and during that time have sought the advice of many physicians. The fault has been sometimes with the physician, sometimes with the patient, and sometimes with both.

Etiology.—Chromophytosis depends on the germination and growth, among the epidermic cells, of a microscopic fungus, discovered by Eichstedt, in 1846, and known as the *Microsporon furfur* (Fig. 6). The spores are, as the name implies, exceedingly small, but of varying size and uniformly round; the mycelium is sometimes simple and sometimes branched. The fungus is readily detected by scraping a few scales from the surface, washing them first in ether, and afterward in alcohol, to remove the adherent sebum, etc., and then examining them in a little glycerine with an amplifying power of five hundred diameters. The spores are found only in the epidermis and do not invade the hair-follicles or hairs.

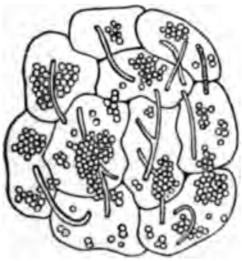

FIG. 6.—Microsporon furfur.

Treatment.—Chromophytosis, as well as the other vegeto-parasitic diseases of the skin, are favored and promoted by cachectic conditions, and any indications of ill-health on the part of the patient should be carefully considered and remedied, if possible. To this end, good air, good food, suitable clothing should be secured. In addition, proper internal medication, either ferruginous, cinchonic, or oleaginous, should not be forgotten. If the patient also suffers from phthisis or syphilis, the usual constitutional treatment for these diseases should be maintained. These points being attended to, the local treatment is then to be decided on. As the cause of the disease is a fungus flourishing among the epidermic cells, the first and main indication is to get rid of it. This can only be accomplished by means that will succeed in causing the death and exfoliation of the stratum corneum. The epidermicide which I at present prefer, and find amply sufficient, is chrysophanic acid. A five per cent. ointment is to be rubbed into the patches once or twice daily, until sufficient irritation has been produced to loosen the outer epidermic cells. When these begin to loosen. the patient is thoroughly rubbed with green soap, put into a warm bath, scrubbed with a soft flesh-brush, and the affected epidermis removed. After the bath he is thoroughly dried, rubbed with an emollient, and put to bed until the next day. If the treatment has been sufficiently thorough the patient is rid of his disease. In the majority of cases, however, this is not the case. A few patches, perhaps almost invisible, have escaped, and if nothing more is done, the affection will spread from these until its original extent is gained. It is well, then, for the patient to sponge the surface daily with the *Acidum Sulphurosum* of the pharmacopœia, or with a solution (1—10) of hyposulphite of sodium. This should be kept up for ten days or two weeks, at the end of which time the patient's skin should be thoroughly inspected, and if there are the slightest indications of a return of the trouble, the chrysophanic acid, green soap, warm bath, flesh-brush, etc., are to be again brought into use. Two or three courses of this sort are usually sufficient to eradicate the affection. One caution, however, should be remembered. During the progress of the affection the patient's underclothes become contaminated with the fungus, which is not removed or destroyed by ordinary washing, and if these garments be resumed after the treatment is finished, a relapse is very likely to occur. With this in view we usually direct the patient to destroy the undershirts worn during and before the treatment.

Instead of chrysophanic acid, the tincture of iodine may be painted on the affected surface once or twice a day, until the epidermis begins to peel ; after which the green soap, etc., are employed as already mentioned.

In addition to the drugs mentioned, the following have been recommended: ***Anisum***, 18; ***Argent. Nit.***, 21; ***Ferri Chlor.***, 55; ***Hydrarg. Ammon.***, 63; ***Hydrarg. Chlor. Corros.***, 64; ***Silica***, 105; ***Sodii Boras***, 106; ***Sodii Sulphis***, 107, and ***Veratria***, 102.

COMEDO.

Syn. : Acne punctata.

Definition and description.—The term Comedo is applied to a condition in which the skin, especially of the face, is studded with little black points looking like grains of gunpowder. These points indicate the opening of the sebaceous follicles, and the black speck itself is caused by the dirt which has been entangled in the external extremity of the plug of sebum which fills the follicle. If the skin in the neighborhood of these points be firmly compressed, the sebum will be forced out of the follicle in the form of a little worm-like body. Comedo, then, is simply a condition in which the sebum is retained in the follicle for an unusual length of time. This distends the follicle, and the longer the retention is maintained the larger the follicle becomes. The process, as a rule, goes on without giving rise to any special local irritation, and nothing marks the progress of the affection other than an increase in the size and number of the affected glands. Occasionally inflammation ensues, and a papule or perhaps a pustule forms, giving rise to a common form of simple acne. Comedo occurs most frequently in young persons, of both sexes, from the age of puberty to the twenty-fifth or thirtieth year. It is rarely seen in those more advanced in life.

Course.—The progress of the affection is slow and indolent, and if uninterrupted by treatment is frequently prolonged for years, gradually becoming less evident, and finally disappearing entirely.

Diagnosis and prognosis.—As Comedo is totally unlike any other affection of the skin, its diagnosis offers no difficulties. The prognosis, however, is not so easily decided.

While in some cases proper treatment will produce prompt amelioration and total disappearance of the eruption, in others the most careful and persistent efforts are followed by continual and annoying relapses.

Etiology.—The affection consists, as above stated, in retention of the sebum with enlargement of the sebaceous follicles, and depends, we believe, in the majority of cases, on gastro-intestinal or genital irritation ; in fact, on the same causes as acne simplex, which has already been considered. Masturbation, in particular, we are satisfied, has much to do with the continuance and aggravation, if not the origin of the affection.

Treatment.—Attention should be given to the general health if this seems to be in any way disordered. Dyspeptic conditions, anæmia, and constipation, are sometimes present, and both the general condition and the local difficulty sometimes improve rapidly under the use of small doses of iron, nux vomica, and sulphur, continued for two or three weeks or longer. If masturbation be a complicating feature, the habit must, of course, be abandoned. It is not, however, an easy matter to determine whether this practice is indulged in or not, as direct inquiries on the subject are usually fruitless. If the question, however, can be positively determined, phosphoric acid and ergot are likely to prove of service. The principal indications for *local* treatment are to remove the sebaceous plugs and to stimulate, if possible, the functions of the skin. The impacted sebum may be removed by squeezing the skin around the follicle between the nails, or more readily with the aid of a watch-key. This very common device is objectionable, as the sharp corners of the watch-key tube may çut into the skin, and incite inflammation, leading to the formation of an acne papule. A much better way is to use a little instrument that I have devised for the purpose, and which is here shown (Fig. 7).

The little circular ring at the end of the instrument is placed over the comedo and gentle pressure is made. This will generally cause the plug to emerge from the follicle. Sometimes, however, it requires considerable pressure to effect this; more, in fact, than it is prudent to exert or the patient cares to endure. This difficulty can be remedied by first distending the mouth of the follicle with the point of a needle, and afterward applying the instrument.

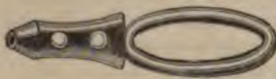
FIG. 7.—Comedone-extractor.

If the affection be at all extensive and the comedones numerous, the physician can teach the patient how to use the instrument, and then abandon this part of the treatment to the latter's own care. The patient, with the aid of a looking-glass, can thus, in a few *séances*, free himself, at least temporarily, of the greater part of his trouble; and by resorting to the operation, from time to time, when necessary, keep his face in a very presentable condition, until the tendency to the return of the affection is broken up, or of its own accord deserts him, which it will usually do in four or five years from its first appearance.

It is also usually desirable to stimulate the circulation in the skin and to improve the tone of the contractile tissue that surrounds the sebaceous follicles. To this end electricity will often prove of service. My friend, DR. DENSLOW, of this city, has récently communicated to me a method, by means of which he believes he accomplishes the same end. It consists in giving full doses of ergot.

Frequent washing of the face with soap and water, or with Quillaya, is usually beneficial.

ECZEMA.

Definition, description, course, and varieties.—Eczema is a non-contagious affection of the skin, of multiple lesion and of constitutional origin. As all cases of eczema are not alike either in their appearance or in their course, we are of necessity obliged to acknowledge several varieties, and to describe them separately, if a clear conception of this polymorphous disease is to be obtained. The task is not an easy one, as there is no one form that may be regarded as strictly typical, and of which the others are but varieties, and yet there are certain features common to all or most all cases, that the experienced eye will detect at the clinic, but which are exceedingly difficult to transfer to paper. In this most common of all cutaneous diseases, we are forced to recognize differences depending on the degree of inflammatory action present, on the duration and the character of the lesion, and on the location that is affected, as all of these greatly modify the appearances presented, the prognosis, and the details of treatment.

An eczema may commence abruptly and with evidence of intense inflammation, or gradually, and without much local reaction, or any constitutional disturbance. In other words, it may be, from the beginning either acute or subacute. It may run its course in a few weeks, or it may persist for months or years, that is, it may be acute or chronic. Or again, the affection may exhibit features indicating an acute local action and yet persist for a very long time in this condition; in other words, it may be at the same time acute as to its degree, and chronic as to its duration. We will commence with the acute and afterward describe the chronic forms.

An acute eczema, if the eruption is at all extensive, may be preceded by febrile action, usually mild, rarely severe. This, if present, is succeeded by the appearance of a reddened patch of varying size, due to acute capillary hyperæmia. This is accompanied with local elevation of temperature, and a sensation of burning or itching. In a day or two, or even in a few hours, this reddened patch becomes the seat of the special lesions of eczema. These are either vesicles, pustules, papules, fissures, or a condition that I am in the habit of terming primitive exfoliation. The occurrence of the lesions is due to the presence of an exudation which, leaving the vessels, seeks to make its way to the surface. This exudation may be serous, purulent, or plastic. In the latter case it is retained within the tissues of the skin, and tends to accumulate at numerous isolated points beneath the epidermis, and gives rise to papules. If, however, the exudation is serous or purulent, it penetrates and traverses the stratum Malpighii, and appears beneath the stratum corneum. Having arrived here, and urged outward by the pressure of continued exudation behind, it either lifts up little portions of the stratum corneum, forming vesicles or pustules, or else produces linear ruptures of this stratum, and passes outward through the little clefts or fissures thus formed ; or, lastly, and I believe most frequently, simply loosens the attachments of the horny cells, and sweeps them away in minute and almost imperceptible scales. Formerly the only admitted primitive lesion was the vesicular, the pustular form being regarded as a distinct disease, to which the name of Impetigo was given, and the papular form, also believed to be distinct, was termed Lichen.

The vesicles of eczema are usually quite small, except on the palmar and plantar surfaces, seldom being larger than pin-heads, and closely aggregated. They rarely retain their integrity for more than twenty-four or forty-eight hours, being broken by friction from the clothes or the patient's rubbing and scratching, or if this does not occur, they soon rupture spontaneously in consequence of the pressure of the exuded fluid. On breaking they give issue to a colorless and transparent fluid which, unless absorbed by the clothing, loses a portion of its water by evaporation, and dries into yellowish or amber-colored, sticky crusts, varying in thickness with the amount of exudation. If the fluid has been absorbed by the under-garments they are found to be spotted, though not discolored, and stiffened by coagulation of the plastic exudation in the meshes. This stiffening of the linen is a peculiar and marked characteristic of the eczematous exudation. If the crusts be removed we find a moist and reddened surface, from which fresh exudation may almost be seen to ooze.

This surface at first sight seems to be ulcerated, but closer inspection simply shows a condition of extremely superficial erosion, due to the shedding of the stratum corneum, the stratum Malpighii being still intact. The redness is not absolutely uniform, but more frequently punctate, and examination with a lens of high power will show the points of most intense congestion to correspond to the situation of the papillæ. The exudation is not pure serum, but contains a little fibrin and a few leucocytes. If the surface be wiped dry it will remain so but a short time only, and will soon be again covered with exudation that on drying will form fresh crusts. These will remain attached until removed mechanically, or until they have acquired such a thickness that they drop off spontaneously.

The preliminary hyperemia and the vesicle formation may be conveniently termed the first stage. This is always of brief duration; not so, however, the second stage or period of exudation and crusting. This may last almost indefinitely ; at least, it is impossible to say at the beginning how long it will continue. After a time, however, the exudation diminishes, the crusts become thinner, and the surface under them dry, and, gradually, attempts are made at the re-formation of a new, horny epithelium. The aspect of the eruption changes and the surface becomes scaly, the scales being composed of new epidermis. The newly formed cells, however, do not possess normal viability, and are quickly shed and replaced by others, exhibiting a somewhat closer approximation to the normal type. As the patch gradually tends toward recovery the desquamation lessens, and the white scales become firm and more adherent, until, at last, the corium, rete, and stratum corneum recover their normal condition and no trace of the eruption remains.

The pustular form of eczema differs from the vesicular, simply in the larger proportion of leucocytes contained in the exudation. The pustules form on a reddened patch, break, and give issue to the exudation which, drying, forms somewhat greenish crusts. On removal of these a raw surface becomes visible. After an indefinite period the exudation diminishes and disappears, and a dry and desquamating surface replaces the previous moist condition. After a time the desquamation ceases, and the skin returns to a healthy state.

Between the forms just mentioned there may be any number of gradations, simply characterized by the greater or less proportion of leucocytes contained in the discharge, and this would appear to depend on the constitution of the patient and his own peculiar pyogenic proclivities.

In the papular form of eczema the exudation is less watery, and instead of reaching the surface and forming vesicles or pustules, produces little solid elevations which are usually not so closely aggregated, at least, in the beginning, as the lesions already mentioned ; they are also slower of formation, and having once appeared, persist for a much longer time than the vesicles or pustules. As the itching which accompanies the eruption leads to scratching, the little papules become torn, and a small amount of fluid exudes, which dries into thin crusts. After some weeks or months, as the case may be, the tendency to papulation ceases, the skin becomes drier and more scaly, until finally every trace of lesion disappears.

In the fissured form we find little clefts in the epidermis giving issue to a usually slight amount of serous or sero-purulent exudation. Thin crusts may form and continue until there is a gradual resumption of the healthy condition through the same changes as in the other forms.

There is still another way in which an acute eczema may commence. As the exudation gradually reaches the surface the stratum corneum becomes loosened, and almost imperceptibly exfoliates,* or is rubbed off by the patient in his efforts to calm the accompanying irritation. This results in a humid and exuding surface, with the rete cells naked and exposed. Crusts form, and the eruption passes through the same stages as in the other forms. The dry and scaly condition, present in all forms prior to recovery, is usually termed the third stage.

The varieties of eczema depending on the character of the primitive lesion have received certain special appellations, as *Eczema vesiculosum*, *pustulosum*, *papulatum* and *fissum* or *rimosum*. In addition I have ventured to apply the specific appellation of *nudosum* to the form last described. Besides these we have names indicating the condition of the eruption, as *Eczema humidum* and *siccum*, and other names referring to the locality occupied, as *capitis*, *manuum*, etc.

The *location* of the eczematous eruption, to a certain extent influences its aspect. Thus, on the head the exudation glues the hairs together, and forms much thicker crusts than elsewhere, and in the *eczema capitis* of children small abscesses of the scalp are not infrequent, and the lymphatic glands at the back of the neck become enlarged and somewhat tender. Pediculi also appear to exhibit a preference for the eczematous scalp of a child.

When eczema involves the region of the mustache and beard in adult males, the inflammation sometimes dips down into the hair-follicles and excites a condition usually included under the name of Sycosis or Mentagra.† The prominent peculiarity of this form is the appearance of little pustules surrounding the mouths of the hair-follicles. The hairs become loosened, and if extracted with the forceps frequently bring with them their root-sheaths which form a cylindrical investment to the hair-root.

On the *palmar* and *plantar* surfaces the fissured and vesicular forms are most commonly met with. Owing, however, to the greater relative thickness of the stratum corneum in these regions, it does not rupture so easily, but the back pressure of the exudation dissects it up to a greater or less extent, and we consequently have much larger vesicles than are met with elsewhere.

The patches of eczema may vary in number and in size; occasionally the greater, and practically the entire surface may be involved. Whatever its extent, pruritus is one of its prominent accompaniments, and the aspect of the eruption may be more or less modified by the existence of scratch-marks in addition to the lesions peculiar to the disease itself.

Having considered the acute forms, we pass to the *chronic*. Chronic eczema may be an affection that has commenced acutely, but on reaching the second or third stage may persist in one or the other of these conditions for an indefinite period; or, on the other hand, the early stages may be absent and the eruption commence as a subacute affection characterized at its beginning by a slightly reddened, slightly elevated, sometimes roughened or papulated patch, and covered with fine, non-imbricated scales. These patches are usually small and circumscribed, rarely attaining the extent frequently met with in the other forms. The peculiar feature, that, besides chronicity, usually characterizes long-standing cases of eczema, is the presence of more or less infiltration. This may be a uniform circumscribed thickening of the skin upon which the special lesions repose, or the surface may be rendered rough and uneven by the occurrence of papules and fissures. Sometimes the papillæ of the corium undergo considerable hypertrophy and give the thickened patch a somewhat warty aspect. Occasionally both the papillæ and other portions of the derma, more especially in the neighborhood of the ankles, participate in the proliferation of new tissue to an extent that may cause the affection to simulate Elephantiasis.

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* I have elsewhere (87, 149) more fully considered this condition, which is not generally alluded to in works on dermatology.

† It is to be distinguished from a parasitic disease of these parts which will be later described under the name of *Trichophytosis barbæ*.

The various conditions above described may persist indefinitely, sometimes undergoing spontaneous recovery, though not, as a rule, if there be any marked degree of infiltration, or any proliferation of new tissue.

Among the most annoying features of eczema is the tendency to relapse. Whether a case recovers spontaneously or is cured by treatment, there is no guarantee that it will not, in a few weeks or months, return as severely as before, that is to say, if the causes which produced the first attack remain in operation.

The pruritus that accompanies all forms to a greater or less degree is sometimes so severe as to interfere with the patient's rest at night, leading ultimately to decided nervous prostration.

Eczema may occur in persons presenting all grades of general health; in those who otherwise appear strong and hearty, and in those who are enfeebled by various causes.

Diagnosis.—The experienced eye rarely has any difficulty in detecting eczema in any of its varied phases. Occasionally, however, it is difficult to say whether a chronic superficial congestion should be considered an eczema that has halted in the first stage, or a simple erythema. Occasionally, also, a red infiltrated patch with large scales may closely simulate a psoriasis, or one with small scales, pityriasis. In either case if the resemblances are so close that an absolute diagnosis cannot be made, it is of little consequence, as the treatment would be essentially the same. In certain locations, however, it is important to be strictly on the guard in the matter of diagnosis; thus a scaly eczema of the scalp might very closely resemble a partly cured favus or trichophytosis, so on the face, an eczema barbæ might be mistaken for trichophytosis. In these cases the microscope would enable the diagnosis to be made without difficulty. The palmar and plantar surfaces in chronic eczema sometimes present appearances that may greatly resemble syphilitic lesions of the same parts.

Prognosis.—The prognosis of eczema varies greatly in different cases. In acute eczemata the prognosis is almost always extremely good, for, as a rule, you can assure the patient that his trouble can be relieved within a reasonable period. In some of the chronic forms, however, especially if there be much long-standing infiltration, the prognosis should be more guarded, and no definite assurances should be given to the patient as to the time that will probably elapse before he is cured. He should further be warned that during treatment that appears to be progressing favorably, he is liable at any time to temporary aggravations, sometimes traceable to indiscretions on his own part, but, also very often coming on without assignable cause. The eczemata that are, perhaps, among the most obstinate are the chronic infiltrated ones of the scrotum.

Etiology.—Eczema is undoubtedly due, in the writer's judgment, to the blood condition resulting from imperfect assimilation of the food and deficient oxidation of the protein compounds existing in the blood, a point fully discussed in connection with the rheumic diathesis (p. 126). This is, *par excellence*, the predisposing cause. The exciting causes, however, are various. Thus in infants the use of acrid and too alkaline soaps may produce irritation that precipitates an outbreak. In older children an invasion of lice may do the same. In adult males a tender skin, a dull razor, and an unskilful barber furnish the necessary etiological factors. In certain avocations the contact with acrid substances, and in certain persons the application of a flaxseed or a mustard poultice will bring out the eruption. On the lower extremities a very frequent cause of eczema is the existence of varicose veins. In these cases the cutaneous circulation becomes sluggish, the vitality of the tissues lowered, and the integument of the part ready to yield to the slightest morbific tendency. The possible connection in some cases between varicose veins and pressure on the vena cava inferior by an enlarged liver should not be overlooked.

Certain other external sources of irritation may lead to an outbreak of eczema, as, for instance, vaccination, or an attack of scabies or phthiriasis. In other words, in persons predisposed to eczema, almost any irritating agency may be sufficient to invite and localize the eruption, while in others the impulse seems to come wholly from within, as the most careful inquiry may fail to elicit any probable external etiological agency.

Treatment.—As Eczema is the most frequent, and frequently one of the most obstinate of all curable cutaneous affections, its treatment certainly merits the most careful and painstaking consideration. At the very beginning all idea of routine treatment must be abandoned. While certain principles of treatment hold good in all cases, each case must be treated on its own merits and in accordance with the peculiar features that it presents, whether these be in respect to age, location, form, stage, special external etiology, etc.

It is not to be denied that a hurried prescription of an ointment or lotion may in some cases dissipate the eruption for the time; but in most instances a well-considered campaign must be undertaken if we desire to do our best for the patient. This campaign will embrace etiological, hygienic, constitutional, and local measures. As regards the local causes whose existence is determined as lice, contact with irritating substances, varicose veins, etc., these must first of all be removed, or their injurious influence negatived. Where there has been no apparent external exciting cause, we proceed at once to hygienic considerations; and these will embrace questions of air, exercise, protection from the elements, clothing, diet, etc. If in any respect these be susceptible of improvement, care should be taken that they are suitably amended. Diet, however, merits special notice, and affects both those who have their diet provided for them, as infants, and those who are old enough to regulate it for themselves. In examining cases of eczema in children at the breast I have long been in the habit of directing special inquiry as to the quality of the milk furnished by the mother or the wet-nurse. This will very commonly be found defective, and the defect that I believe to be most frequent is a diminished proportion of the fatty ingredient (87, 165). When such is the case the fault may be in great measure corrected by giving the child an additional amount of fatty matter in the form of cream or cod-liver oil, either directly, or through the medium of the mother. In the case of bottle-fed children, the basis of whose diet is cow's milk, the cream or oil can be added directly to it, for, as is well known, children do not, as a rule, exhibit the same repugnance to cod-liver oil that most adults do. In these cases the additional fatty food appears to supply a want, and benefit almost always results from it.

The influence of diet on the causation and, in adults, aggravation of eczema, merits investigation. For some time past I have made particular inquiry as to the diet preferred by eczematous patients, making three classes, carnivorous, omnivorous, and herbivorous. To the first class were assigned those who were specially fond of meat, eating it three times a day, and consuming with it but a very small proportion of bread and vegetables. In the second class were placed those who expressed no great fondness for meat, but who ate it in moderation, together with the usual proportion of vegetables; and thirdly, those who disliked meat or ate very little of it and whose diet was, in the main, vegetarian. An examination of the cases of eczema in which I made note, as to the points above mentioned, reveals the fact that fifty-six per cent. were carnivorous, forty per cent. omnivorous, and four per cent. herbivorous.*

The practical bearing of this will be seen when we consider the connection between the rheumic diathesis and the suboxidation of albuminoid food. When, then, a case of eczema, more especially of the chronic form, presents itself, inquiry should be made as to these points, and if the patient be frankly carnivorous, he must be made distinctly to understand that overindulgence in this respect must be promptly curtailed, not necessarily abruptly abandoned. In the omnivora also I am in the habit of restricting the amount of animal food consumed. Many other sufferers from eczema will be found among the class of men who "live to eat" and who are habitually heavy-feeders and who, in addition, attempt to stimulate their digestive functions with a rather liberal use of wine. The dietetic instructions that should be given are self-evident—the difficulty is sometimes to obtain compliance. We find eczema, however, in light eaters, more especially in those who are necessarily so in consequence of dyspepsia, which exacts an immediate penalty in case of over- or even moderate indulgence in the pleasures of the table. The result is that they do not really take food enough, or a certain proportion of it is but imperfectly digested, and the general nutrition suffers. Here again the course is perfectly clear. The dyspepsia must be relieved. In the one case exercise in the open air, in another bitters, tonics, mineral acids, etc., and in a third pepsin or other artificial aids to digestion will prove of service.

The general condition of the skin also requires notice. I do not allude to the diseased parts, but to those which are free from eruption. As a rule, in sufferers from chronic eczema it will be found dry and harsh, and with a tendency to fine epithelial exfoliation. The perspiratory function will be more or less torpid, patients stating that they "do not sweat easily." For the correction of this, I know of nothing superior to the systematic use of the Turkish bath, together with the inunction of some bland oil after the bath. In large cities proper conveniences for this sort of bathing are readily obtainable. Outside of cities, it will be necessary to employ some of the portable arrangements for hot-air bathing, of which there are several in the market. The main advantage derived from these baths is the free induction of perspiration, to which is added, in the regular Turkish bath, thorough manipulation and shampooing of the integument.

Having considered the most obvious features of the etiological and hygienic treatment, we come to the *constitutional*. By this we mean the use of internal remedies. At the outset this naturally divides itself into two varieties, the *rational* and the *empirical*. By the rational treatment we mean that which would appear from the known action of drugs to best counteract the conditions supposed to underlie the eruption. This is fully discussed in the article on the rheumic diathesis, and need not be referred to in detail in this place. Many cases of eczema may be made to disappear by these means alone, as I know by abundant experience, and without the aid of local means or the use of the empirical remedies, to be presently noticed. The judicious use of purgatives, diuretics, alkalies, oxidants, and hepatic stimulants, will frequently accomplish all that is desired in the way of ultimate result. Frequently this result is more slowly attained by the use of these agencies, but the cure, I am satisfied, is more thorough and of longer duration.

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* I have not unfrequently met with eczema in dogs and cats, but have never seen it in cattle, sheep, or horses.

By *empirical* treatment, I mean the use of such remedies as experience has shown to be useful, independent of any theoretical views as to their mode of action. Those which have hitherto proven most serviceable are the ones which appear to exert a direct and specific influence on the skin itself, as evidenced by the cutaneous lesions which result from their long-continued and excessive use. Chief among these is *Arsenic*. No one can peruse pages 23 and 24 of this book without becoming satisfied that arsenic is a decided cutaneous stimulant when given in the ordinary therapeutic doses.

If arsenic is administered in eczema in ordinary doses (say ♏ iij.—x. of Fowler's sol.) the behavior of the eruption will depend very greatly upon its condition as regards the degree of inflammatory action present. Most authorities agree that in cases of acute eczema, arsenic, given as above, will increase the inflammation and irritation, and generally aggravate the trouble. With them the chief field for the use of arsenic is in subacute and chronic conditions, and more especially when the disease is in the third or scaly stage. Under these circumstances arsenic, properly administered (that is in full doses), certainly exhibits a marked and decided curative effect, and this effect will become manifest with a promptness proportionate to the size of the dose. Its best effects seem to occur at the verge of tolerance, just before the drug begins to declare its energy on other parts of the body. This limit of tolerance is manifested by irritation of the conjunctivæ, swelling of the eyelids, gastric irritation, and perhaps swelling of the feet, and sometimes temporary albuminuria.* It is, however, somewhat an open question whether it is better to reach the limit of tolerance quickly or gradually, that is, whether the commencing dose shall be five or ten minims of Fowler's solution, or whether it shall be two or three minims gradually increased. The drug, at all events, should be given well diluted and just after a meal, never on an empty stomach. MR. HUNT'S rules on the subject have already (p. 26) been given. The preparation of arsenic to be used is not, I believe, a matter of indifference. My own preference is for Arsenious acid itself, rather than its alkaline salts (see p. 27).

It is not, however, in subacute eczema alone that arsenic is capable of being made useful. In the acute forms also it can sometimes be employed to advantage. It is simply a question of dose. As before stated arsenic given in the usual doses will generally aggravate an acute eczema, but if the dose be diminished to one-fifth, one-tenth, or one-twentieth the ordinary amount, it will no longer aggravate, but, on the other hand, by gentle stimulation exert a decidedly alterative and beneficial effect. The most desirable dose in a given case can only be arrived at by experimentation, commencing with a small one and diminishing it if necessary, or commencing with a very small one, and increasing it, if no effect, either good or bad, is apparent. The slightest aggravation of the eruption that appears to be due to the action of the drug calls for its immediate suspension, or further continuance in still smaller doses.

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* I always closely watch the urine of patients taking large doses of arsenic, and discontinue it on the slightest indication of renal irritation.

Where arsenic fails to relieve the eruption, or where for any reason it is contraindicated, *Tar* may sometimes be used to advantage, especially in dry chronic forms. The *Pix Liquida* of the pharmacopœia may be given in doses of from two to five grains three times a day, the dose to be gradually increased to the limit of tolerance, which usually manifests itself by symptoms of gastro-intestinal irritation, and sometimes by a slight efflorescence on the skin.

Carbolic acid appears to be analogous in its action to tar, and may also sometimes be given to advantage in the same forms of eczema.

Phosphorus, as specially recommended by BROADBENT, is undoubtedly of service in long-standing eczema. Its *modus operandi*, however, is obscure. Its direct action on the skin appears to me to be slight, while its known affinity for the liver, warrants the inference that it chiefly acts in virtue of its power as a hepatic stimulant. The dose of phosphorus may vary between $\frac{1}{100}$ and $\frac{1}{25}$ of a grain, and should never, I think, exceed the latter amount. I, of course, refer to reliable and active preparations of phosphorus, and not to such as from age or improper preparation have lost much of their activity. The most eligible forms for the administration of this drug are the one per cent. solution of phosphorus in oil, or some of the ready-prepared pills of the market. The activity of these, however, should not be assumed on the strength of the manufacturer's guarantee, as I have several times met with phosphorus pills which, on examination, exhibited no trace of active phosphorus. A good pill, on being cut in two, gives out a strong phosphoric odor, and if it be scraped a little with the point of a penknife, in a dark place, will display marked phosphorescence.

Cantharides is recommended by many authors, more especially the French. My own experience with it is too limited to enable me to speak confidently as regards its value. The tincture well diluted is the most eligible form for its administration, and a commencing dose of two or three drops may be gradually increased to ten or more. Of course strict watch should be maintained lest urinary irritation or severe vesical trouble seize the patient unawares.

The foregoing remedies are chiefly of service in chronic cases. In acute cases, especially at the very beginning, I have seen prompt change for the better, I might almost say abortion of the eruption follow the use of small doses of *Rhus Toxicodendron*. The remarkable susceptibility displayed by some to the effect of this poison, even in a state of extreme dilution, is evidenced by the occurrence of the Rhus eruption in persons who have simply come near, without being in direct contact with the plant, warn us that the dose should be exceedingly small. The $\frac{1}{100}$ of a drop of a good tincture or even a less amount is not too small a dose to commence with, as I am satisfied by abundant personal experience.

In both acute and chronic cases of a pustular character—the Impetigo of the older writers—when the suppuration is abundant, the *Sulphide of Cal-*

cium will often prove of service. This condition is more frequently met with in children than in adults, and the doses that I have found of service varied from $\frac{1}{100}$ to $\frac{1}{25}$ of a grain. The smaller doses are best adapted to acute, the larger ones to subacute conditions.

Lastly among the empirical drugs *Viola Tricolor* must be mentioned. This drug has already (p. 113) been discussed. In eczema capitis, acute or chronic, and especially in children of a lymphatic nature, this drug exhibits such prompt effects (good or bad) that we need not wonder that the writers of the last century considered that it had a specific influence in this disease. As before stated, if given too freely or in too large doses, it very often aggravates the patient's condition, as evidenced by increased heat irritation, and exudation. In chronic cases this aggravation is often desirable; in acute cases it should never be induced if it can be avoided. The temporary aggravation of the subacute eruption by the internal use of Viola tricol. accomplishes much the same result as we sometimes seek to bring about by the external use of strong alkaline and other irritant applications. On withdrawal of the irritant the aggravation is succeeded by a reaction which results in an improved condition of the eruption. In subacute cases then the dose may be large, but in acute ones it should be quite small.

External treatment.—While internal treatment alone is capable of curing many cases of eczema, there is no doubt as to the advantages to be derived from the use of appropriate external applications in connection with it. Here, too, all idea of routine treatment must be abandoned. As regards the internal treatment it is the *patient* with all his functional or organic derangements that demands consideration; but in the local treatment it is the condition of the cutaneous *lesion* that must be studied and cared for.

Although Eczema presents so many phases, varying with the stage, character of the primitive lesion, degree of inflammatory action, etc.; the indications for local treatment are yet so clear that, once rightly appreciated, many of the apparent difficulties disappear.

Every outbreak of acute eczema commences with a prodromal period of local cutaneous congestion, characterized by heat, redness, slight or almost imperceptible swelling, and certain subjective sensations that attract the patient's attention to the part. This period of congestion is rarely presented to the eye of the physician, except when it occurs in patients who are already suffering from more advanced eczematous lesions in other parts of the body, and who have already come under treatment for them.

Under these circumstances we have known the application of the solid nitrate of silver cause a disappearance and abortion of congestions that we had every reason to believe would have otherwise developed into frank eczemata.

This active congestion, if uninterfered with, usually eventuates in one of the special primary lesions already described. Quite rarely, however, these may not appear, but the active congestion may degenerate into a passive one, more frequently seen on the face than elsewhere,* and usually accompanied with a moderate amount of heat or itching. In these cases the nitrate of silver and other astringents are of service, and in addition we have derived benefit from the application of a solution of bromide of potassium in rose-water and glycerine, varying in strength from twenty grains to the ounce. Fluid extract of ergot diluted with glycerine or rose-water ointment is also of service. The pruritus, however, must be attended to. This ceases with the congestion, but as the latter will not always disappear with wished-for rapidity, anti-pruritics are often advisable. Besides hydrocyanic acid, chloroform, and many others that will suggest themselves, a number of useful combinations will be found in the Formulary.

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* In these cases the diagnosis of "chronic erysipelas" is often improper

The early vesicular and pustular condition, though rarely coming under notice, will be greatly benefited by the local application of cooling lotions, as of lead and opium, or still better the "black" or "yellow wash" (mercury and limewater).

The second stage, characterized by exudation and crusting, necessitates ablution, but unfortunately the contact of water proves very irritating in many cases, often causing a decided aggravation of the patient's sufferings and a prolongation of the trouble.* If, however, we bear in mind the condition present, namely, the skin deprived of its horny epidermis, but with the delicate and succulent cells of the rete Malpighii exposed, we can readily understand why the water proves irritating. It is due to endosmosis, producing tumefaction of the cells and pressure on the fine nerve-terminations ramifying among them. The remedy is equally apparent. It is only necessary to use, instead of pure water, a solution whose specific gravity approaches that of the serum of the blood. A mixture that we frequently employ for this purpose is rose-water to which a little glycerine and chloride of sodium have been added. Sometimes, when the crusts are very thick or tenacious, it is well to saturate them thoroughly with oil, and afterward apply a poultice for a few hours until they are loosened sufficiently to be easily removed.

The crusts having been removed, the cleansed parts are in a condition to benefit by some medicinal application, usually in the form of ointment. Of ointments the Oxide of Zinc, when nicely made, is perhaps the best where a protective application alone is needed, or when a great extent of surface is involved. It is probably not specially curative, its chief office being to shield the parts from friction and atmospheric influences. The Benzoin which it contains, probably however, exerts a soothing and curative influence. The most effective ointments, however, are those containing some preparation of mercury, as the white precipitate, the nitrate, the mild chloride, and the black oxide. The first two may be employed in ointments of the officinal strength, or somewhat diluted, the third from five to ten per cent., and the last from two to five per cent. Lead comes next to mercury in usefulness, and is generally employed in the form of *Ungt. Diachylon.*

The pruritus, which is usually present and sometimes severe, invites attention. Unfortunately, it is often very difficult to remove. Decided relief to the itching is sometimes obtained by the addition of Tincture of Conium, Hamamelis, or Stramonium, or of crude Petroleum to one of the ointments above mentioned. In spite of these the itching will often prove obstinate, and disappear only on the cure of the eruption itself.

When an acute eczema has passed through the period of exudation and crusting, and enters the third stage, characterized by redness, dryness, and scaling, the changed conditions demand a change of treatment. The preparations of zinc, lead, and mercury, just alluded to, prove of very little service. Mercurial ointment (*Ungt. Hydrarg.*), and a two to five per cent. solution of oleate of mercury, are often useful. As a rule, however, dependence is usually placed on some of the preparations of tar. Of these the most important are the *Pix Liquida*, the *Ol. Rusci*, and the *Ol. Cadini*. The last, when genuine (which is seldom the case), is decidedly the best. The tar is mixed with simple ointment in the proportion of half to one drachm to the ounce. A useful preparation belonging to this group is the "*Olio di mais guasto*," much used of recent years in Italy.

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* This aggravation by water has induced some dermatologists to go to the length of recommending that washing be abstained from for days and even weeks at a time. I am not of the opinion, however, that the accumulation of dirt and filth that necessarily results is a useful accompaniment to the eruption.

In the fissured form of eczema, more particularly of the hands and behind the ears, I have found Graphite (plumbago)* in ointment (1—10) or mixed with some inert powder, as Lycopodium or precipitated Phosphate of Calcium, exceedingly valuable.

When an eczema becomes chronic, it does so either from sheer indolence, or in consequence of excessive infiltration. If the indolence is marked by decided venous retardation, with dark bluish red color, Hamamelis will be found specially useful. If, however, this feature is not present, or the color of the patch rather paler than usual, it will not be of much, if any, use. Under these circumstances we need stimulating, *i.e.*, irritating applications. The bases of these may be *Hydrarg. Biniod.*, *Hydrarg. Bichlor. Potass. Iod.*, *Iodine*, *Cantharides*, *Croton-oil*, *Cardol*, and many others that will immediately suggest themselves. A single application of either of these is often sufficient to change an indolent patch of eczema into an active one, which then only requires the treatment appropriate to the second stage of ordinary acute eczema to bring about a cure within a reasonable period. For a few years past we have obtained excellent results by the hypodermic injection of the Arseniate of Sodium into the eczematous patch. We use solutions of one-fifth, one-half, and one per cent. If there be a single patch of moderate size, a single injection of five to ten minims of the one or one-half per cent. solution is made. If the patch is larger, or if there are several patches, the weaker solutions are employed, and two or more injections made into the larger patches, or distributed among the smaller ones. The injections are to be repeated at intervals of two or three days. As yet we have seen neither abscess nor undue reaction. If the physician will take the precaution to obtain pure Arseniate of Sodium and distilled water, and carefully make the solution himself, he will be more likely to obtain good results than if he leaves the fabrication of the solution to some apothecary's clerk.

A chronic eczema, characterized by excessive infiltration, rarely exhibits any tendency to heal until the infiltration has in a measure been dissipated. The lead, zinc, and mercurial ointments will rarely prove of much service in these conditions. The special irritant applications just mentioned will do more harm than good, and will probably increase the infiltration. Its removal, however, may frequently be accomplished by the strong alkaline lotions. If *Liq. Potassæ*, or a stronger solution of potash, be applied to the infiltrated patch, we will observe, in a few minutes, a more or less copious exudation of clear serum, with, perhaps, a slight temporary increase of swelling. The exudation may continue for some hours, and then gradually diminish. Coincident with the decline of the irritation, the infiltration in part subsides. The application may be renewed at the end of three or four days or a week. The *modus operandi* of the alkaline application is not quite clear. The effects are possibly due to exosmosis, as we have seen the same result follow the application of strong glycerine. Instead of the potash solutions, *Sapo Viridis*, or ordinary soft-soap, may be used. This should be well rubbed on with a bit of moistened flannel, till the exuding serum has a slight tinge of red; the application to be repeated as often as necessary—emollients to be used in the intervals.

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* The finest and best Graphite that I have met with for this purpose is manufactured for the use of photographers, and is to be obtained from dealers in photographic chemicals.

We may also attempt the reduction of the infiltration by stimulating the absorptive function of the sanguineous and lymphatic capillaries. The pathological condition present consists in a superabundance of small white cells. Whether these are outwandered leucocytes, or proliferated connective-tissue corpuscles, is a question not yet settled. The present problem is to get them away from the part of the skin in which they have accumulated. Which set of capillaries performs the principal, or perhaps the entire work in this matter, we frankly confess we do not know. Certain it is, however, that "stimulation of the absorbents" may be effected in several ways. The most effective of these is kathodic galvanism. When this is impracticable, we are accustomed to rely upon some of the more active so-called "acro-narcotics" of the indigenous materia medica. Among these Hydrastis and its derivatives hold a first rank. Next in usefulness, in our own experience, has been the Iris versicolor.

After the infiltration has been in part or wholly removed by some of the means indicated, the patch of eruption will be in a condition somewhat similar to that presented by the second stage of an ordinary acute eczema, and prepared to benefit by mercurial and other ointments, followed, if necessary, by tarry applications.

The whole of the foregoing relates to eczematous patches on the general surface, and indicates the main points to be considered in connection with their local treatment. The influence of locality, however, in modifying the aspect of the eruption, has already been noticed, and this influence will necessitate certain modifications of, or additions to, the treatment above detailed.

In eczema of the *scalp*, if at all severe, great benefit will be derived from cutting the hair short. In children and in male adults this is usually practicable—but in women it often is not. Care, however, should be taken that all crusts are carefully removed in order that the local applications may be brought into direct contact with the skin. Simply smearing the ointment on the hair as one would use pomade will not answer. If the scalp is infested with pediculi these must be gotten rid of by the means spoken of in the article on Phthiriasis Capitis (*q. v.*).

When Eczema attacks the hairy portions of the face, the morbid action is sometimes propagated to the lining membranes of the hair-follicle. These membranes are simply involutions of the stratum corneum and stratum Malpighii, and the eczema extends to them by direct continuity of tissue. In these cases it is necessary first of all to remove, by epilation, all the hairs that proceed from diseased follicles in order that remedial applications may penetrate them.

A similar condition, requiring the same treatment, is sometimes met with on and in the neighborhood of the *mons veneris*.

In fleshy persons an Intertrigo may be the exciting cause of an outbreak of eczema. Here dusting powders are useful, and the treatment of Intertrigo (*q. v.*) must be combined with that of Eczema.

In Eczema of the lower extremities, varicosis and very considerable infiltration are frequently met with. In the former of these conditions, Hamamelis, and in both elastic compression will prove of great service. The application of the Martin rubber bandage is specially useful in this connection, as it not only affords great comfort to the patient, but rapidly induces absorption of the infiltration. Next in usefulness is the ordinary elastic stocking. This should be worn after the Martin bandage has been discontinued, and even for a considerable time after the eruption has entirely disappeared. Under all circumstances an elevated position of the limb is more desirable than a dependent one.

Indolent and thickened eczemas of the *palmar* and *plantar* regions are often exceedingly obstinate. In these cases the thickened epidermis may be rubbed down with sand-paper, or with pumice-stone dipped into Vlemingk's solution or soap spirit, and the parts enclosed with some impermeable fabric, as oiled-silk or rubber-gloves. The cutaneous exhalations thus retained macerate and soften the parts, and tend to bring them into a healthier condition. The fissures which are so frequently present should be dusted with graphite, as already mentioned.

The successful management of eczematous lesions necessarily demands an exact appreciation of the conditions present, a knowledge of the means by which they may be remedied, and the propèr application of these means.

In addition to the drugs already mentioned the following have been recommended:

For internal use.—*Acid. Salicyl.*, 10; *Ammon. Acet.*, 14; *Ammon. Arsen.*, 14; *Asafœtida*, 29; *Barii Chlor.*, 31; *Calcii Chlorid.*, 34; *Cannabis*, 38; *Cichorium*, 42; *Coffea*, 46; *Corydalis*, 48; *Dulcamara*, 51; *Eupatorium*, 52; *Ferri Iodidum*, 55; *Ferri Sulphid.*, 55; *Hydrarg. Chlor. Cor.*, 64; *Hydrarg. Iod. Flav.*, 65; *Hydrocotyle Asiat.*, 68; *Juniperus*, 73; *Mezereon*, 76; *Pilocarpus*, 76; *Potassii Acet.*, 90; *Potas. Carb.*, 92; *Potas Sulphid.*, 95; *Sabina*, 102; *Scabiosa*, 104; *Sisymbrium*, 106; *Sodii Silicas*, 107; *Sulphur*, 109; *Sulph. Iod.*, 109; and *Trifol. Fibrin.*, 111.

For external use.—*Acid. Acet.*, 5; *Acid. Sulphurosum*, 11; *Acid. Tannic.*, 12; *Arnica*, 22; *Bals. Gurg.*, 30; *Bismuth. Subnit.*, 33; *Calcii Carb.*, 34; *Calcis Liquor*, 37; *Calx Chlorinata*, 38; *Carota*, 40; *Chloral*, 41; *Citrus Limon.*, 45; *Collod.*, 46; *Creosot.*, 48; *Cupri Sulph.*, 49; *Euphorb. Lath.*, 53; *Ferri Sulphas*, 55; *Fumaria*, 55; *Hydrarg. Cyan.*, 65; *Hydrarg.*, *Sulpho-Cyanid.*, 67; *Imperatoria*, 69; *Mandragora*, 75; *Ol. Oryzæ*, 79; *Pix Lithan*, 88; *Plumbi Carb.*, 89; *Plumbi Iod.*, 89; *Potassii Silicas*, 95; *Potass. Sulphid.*, 95; *Quillaya*, 96; *Rhus Ven.*, 100; *Sabina*, 102; *Scabiosa*, 104; *Silica*, 105; *Sodii Bicarb.*, 106; *Sodii Carb.*, 106; *Sulphid. Iod.*, 109; *Terebinth.*, 110; *Tong Pang Chong*, 111; *Thymol*, 111; *Tussilago*, 112; *Zinci Acet.*, 116; and *Zinci Oleas*, 117.

ELEPHANTIASIS.

Syn.: Elephantiasis Arabum; Bucnemia tropica; Spargosis.

Definition and description.—Elephantiasis is an affection more frequent in hot than in cold climates, and characterized by excessive hypertrophy of the skin and subcutaneous connective tissue of the lower limbs and genitals. The affection is most commonly seen in connection with one or the other of the legs, more rarely of both, the scrotum, prepuce, and labia.

Course.—The course and symptomatology of the disease vary somewhat in different cases. In the majority, however, the disease is ushered in by a febrile attack preceded by a chill. These general symptoms are accompanied by an inflammatory swelling of one of the legs, somewhat resembling a mild erysipelas. After a few days the febrile symptoms subside, followed by a more or less complete disappearance of the local inflammatory trouble. As a rule, however, the swelling does not entirely disappear, but leaves the leg a little larger than before the attack. After a varying and uncertain period, which may be a few weeks or even months, a recurrence of the febrile attack takes place, with renewed swelling of the limb. These phenomena are renewed from time to time, each recurrence being followed by a permanent addition to the size of the affected member. Later the febrile attacks cease, but the limb, nevertheless, continues to slowly enlarge, until it may ultimately attain an immense size. Sometimes the affection is confined to the foot and ankle, or to the foot and leg, or even the thigh may be involved. Occasionally both limbs are affected, but, as a rule, the disease does not attack the second limb until long after the first. In addition the scrotum, or prepuce, or both, may likewise enlarged, or the female genitals.

The hypertrophy in elephantiasis seems to be without natural limit; the limbs may attain a circumference greatly exceeding that of the waist, and the scrotum may form a pendulous tumor touching the floor, and weighing a hundred pounds or more. In like manner the labia may descend below the knee.

The color of the skin in the fully developed disease may be little altered from the normal, but is frequently darker. In consistence it is harder than normal. The surface may be smooth and tense, but more frequently rough, harsh, and nodulated. Soft nodules are sometimes found, which, on puncture, give exit to a thin, lymphy fluid. Ulcerations may occur and abscesses form, or a condition resembling eczema, with moisture and exudation, may be met with. Deeper lesions sometimes occur, the muscles and even the bones being the seat of pathological changes.

Diagnosis.—If proper care is employed little difficulty need be experienced in the diagnosis of Elephantiasis, the peculiar features of the disease being the repeated febrile attacks, accompanied with the pseudo-erysipelatous inflammation, and often with very evident implication of the lymphatic vessels and glands. It must not be supposed, however, that every chronic hypertrophy of the skin is Elephantiasis, as enlargement to a moderate degree may arise from other causes, as from chronic eczema of the foot and ankle, syphilis, leprosy, etc., in the lower limbs, hypertrophic rosacea of the nose, and leprous infiltrations of the face and ears. These should and always can be differentiated by their history and peculiar symptoms.

Prognosis.—Elephantiasis is always a grave disease, and at one time was regarded as almost incurable. At present, however, the prognosis is somewhat more favorable.

Etiology.—The etiology of this disease is obscure. We know that it is extremely prevalent in certain hot climates, and the periodical febrile attacks have led some to regard the affection as due to some special malarial influence. On the other hand Dr. Manson, of Amoy, has recently (1877) advanced the idea that the disease is due to the existence of parasitic *Filaria* in the blood, introduced into it through the medium of drinking water.

Treatment.—Before considering the details of treatment we should appreciate as thoroughly as possible the exact conditions that we have to deal with. These are an immensely hypertrophied member, the increase in size being due to lymphatic effusion, leading to hypertrophy of the connective tissue of and beneath the skin, with probably the formation of considerable new tissue in addition. The vessels, both sanguineous and lymphatic, are enlarged, and the latter frequently varicose. The enlargement and varicosity of these vessels is probably due to partial occlusion of the main trunks in the neighborhood of the groin.

This understood, we will consider the special treatment that is adapted to the different varieties of Elephantiasis, and more particularly of the lower extremity, of the scrotum, and of the labia.

Treatment of elephantiasis of the leg and thigh.—The quickest way of relieving the patient of a member that is a burden rather than a convenience to him would be to amputate, and this has been done. Unfortunately, this would too frequently terminate fatally, and is, therefore, not to be recommended. Some safer, even if less radical plan, must be adopted. Such a method was proposed and carried into effect by CARNOCHAN in 1851. It consisted in ligature of the femoral artery (**153**, Sept., '52). The operation was successful, and has been repeated a number of times by others, with varying, but usually unsatisfactory result. I do not regard this operation as philosophical procedure, as the fault is not that too much blood is sent to the part, but that owing to obstruction and sluggish circulation too little gets back. The statistics of the operation have been collated by WERNHER (*Deutsche Zeitschft. f. Chir.*, 5, '75, 394). Among 32 cases death occurred three times, gangrene requiring amputation twice; relapse in ten cases; ultimate result unknown in five cases, leaving twelve cases in which the result was satisfactory.

The treatment recommended by HEBRA in Elephantiasis is as follows: After the local inflammatory symptoms have been subdued by moderate antiphlogistic measures, he uses cataplasms and tepid baths or inunctions, in order to soften and remove the thick accumulations of epidermis and crusts which may exist. When this is accomplished, inunctions of mercurial ointment into the parts are practised, absorption being more easily effected after the removal of the thick masses of epidermis. A horizontal or somewhat elevated position of the affected limb in conjunction with inunctions will, in such cases, certainly produce a marked improvement, which can be tested from time to time by measurement of the circumference of the limb. By this procedure, the limb, which was previously painful, becomes so quiescent that compression of it by a bandage may be undertaken. An ordinary cotton roller-bandage should be employed, and after being dipped in water should be applied with the utmost nicety. Begin behind the toes and proceed upward in such a way that each turn overlaps the greater part of the preceding one. The bandage should be applied tightly. In a few hours, however, it will become slack and will require reapplication, and this is to be repeated when necessary. The diminution in bulk is much greater during the early part of the treatment.

The only inconvenience connected with this method of treatment is the necessity for the frequent application of the bandage, in consequence of its soon becoming loose, and the necessity for its reapplication by a skilled bandager. To obviate this difficulty, VIDAL employed successfully *elastic* compression at the Hôpital St. Louis in 1872. Unaware of this case, I adopted the same procedure in 1873, using an Esmarch bandage on a patient, in my wards at the Charity Hospital (**87**, 325). Since then excellent results have been obtained by the same procedure at the hands of VERNEUIL, BESNIER, and BROCA.*

Treatment of elephantiasis of the scrotum.—When it is remembered that the tumor may reach such a size that the scrotum drags on the ground, and after removal has sometimes been found to weigh more than a hundred pounds, it is almost needless to say that the only feasible method of treatment is amputation of the mass. This has been accomplished a great many times with success, but the average mortality following the operation has been between five and ten per cent. This is sufficient to deter the surgeon, unless the demand for the operation is very pressing. The details connected with the operative procedure are very thoroughly elucidated in the report of a case operated on by the late DR. THEBAUD of this city (**155**, May, '67). I have but a single suggestion to make in connection with the operation: After the penis and testicles are dissected out and suitable provision, in the way of flaps, have been made for covering them, that the rest of the tumor be removed by the galvano-cautery instead of by the knife. This will obviate hemorrhage, and greatly lessen the danger of pyemia.

Elephantiasis of the vulva, when excessive, necessitates amputation.

EPHELIS.

SYN.: Freckles.

Definition and description.—Freckles, as is well known, are small pigmented macules which appear on the face, hands, and other exposed portions of skin during the warm weather, in those who are exposed to the direct rays of the sun. The active co-operation of this luminary in the production of Ephelis is well recognized, but why they should appear in abundance on the faces of some and not on others, is not known. It is generally supposed to denote a peculiarly delicate skin, but this explanation is not wholly warranted by the facts. Of three persons exposed at the same time and to the same solar influence, one may freckle, a second tan, and the third burn. Freckles are perhaps most frequently seen in blondes, but are by no means rare in brunettes, and we have even seen them in mulattoes. The color of the freckle itself varies in different persons, from a light yellow to a deep brown or blackish brown. As a rule, the degree of pigmentation of the freckle is in direct ratio with the normal degree of pigmentation in the individual bearing them; that is, blondes usually have light colored freckles, and brunettes darker ones.

Course.—Freckles usually appear at about the season when one naturally seeks the shady side of the street or road, continue in full efflorescence during the summer, and fade away as cooler weather sets in. Individual susceptibility, however, differs greatly in this respect, both as to the number of freckles and the date of the appearance; and in some they may be faintly perceived even in winter, to become more marked as the spring and summer advance.

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* MATTELLI: De l'Éléphantiases des arabes et principalement de son traitement par la compression élastique. Thèse de Paris, 1879.

Diagnosis.—It seems almost superfluous to speak of the diagnosis of so common an affection, especially as there is but one other that could by any chance be mistaken for it. I allude to Lentigo, a name often improperly applied to the affection we are considering. Lentigo, like Ephelis, consists in small pigmented macules, but they do not appear to be due to solar influence, they are found on the covered as well as uncovered portions of the body, and do not undergo changes of hue during the different seasons. They are probably a localized excess of true pigment located in the deepest cells of the *stratum Malpighii*, while in Ephelis the discoloration is much more superficial.

Treatment.—As we do not know of any special internal cause that can be said to exert any influence on the development of freckles, we are, of course, deprived of any internal means of combating them, and are forced to rely on external measures alone. Of these any application that is capable of causing an exfoliation of the horny epidermis, will remove the freckle with it. Perhaps the most convenient application is a two to ten grain solution of the bichloride of mercury in cologne water, or other agreeable menstruum. When the freckles are few in number, a few applications of the lotion may be made to each one. If they are very numerous this will prove to be a tedious undertaking and is hardly to be recommended. Occasionally freckles are exceedingly numerous and almost confluent, so that there is really more freckle apparent than normal skin. In cases of this sort, if the patient insists on their removal, it may be effected at the cost of some pain by HEBRA's method.

This consists in applying to the affected parts a compress, wet with a one per cent. solution of bichloride of mercury. The compress is kept moist and retained in place for four or five hours, until a blister forms. This is opened, the epidermis removed, and the part dusted with powdered starch. The freckles will have been removed, but are likely to invade the new epidermis if again subjected to the exciting cause.

Besides the foregoing, the following drugs have been recommended: *Acidum Sulphurosum*, 11 ; *Amygdal. Amar.*, 16; *Citrus Limon.*, 45 ; *Silica*, 105 ; *Sodii Boras*, 106 ; and *Veratrum Album*, 112.

EPITHELIOMA.

SYN.: Epithelial carcinoma ; Epithelial cancer.

*Definition, description, and histology.**—Epithelioma of the skin is a tumor originating in the stratum Malpighii, and characterized by a tendency to increase in size, to invade adjacent tissues, both superficially and deeply, and to destroy them, and ultimately to destroy the life of the individual that bears them. The growth commences, generally speaking, as a proliferation downward of the cells of the interpapillary portions of the stratum Malpighii. These downward roots or shoots assume various forms. After a time the rapid increase in the number of new cells and the circumferential pressure of the surrounding connective tissue compels them to occupy the least possible amount of space. This they seek to accomplish by arranging themselves in concentric and stratified layers, constituting the stratified cell-nests, or "epidermic globes" of histological writers. Thus firmly compressed they form little microscopic masses, which, when a number of them are aggregated, give rise to a tubercle or nodule, the peculiar characteristic of which is hardness. After a time, probably as the result of pressure and deprivation of nutrient material, these nodules "break down," that is, undergo a necrobiotic process, which leads to ulceration. This process continues, and the amount of tissue-destruction is limited only by the degree of vital endurance possessed by the patient.

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* We confine that which follows to epithelioma of the skin proper, and do not include in the description the epitheliomata of mucous membranes or glandular organs.

Epitheliomata, however, are not all alike, either in their behavior or mode of origin. Sometimes they appear to arise spontaneously and without apparent cause, sometimes, on the other hand, they are secondary developments arising as sequels to chronic and long-continued local irritation. Some epitheliomata invade the tissues deeply and infect the neighboring lymphatic glands, others confine their ravages to the cutaneous tissues proper. Some run a rapid course, others exist for years before acquiring a very large size. They vary also as regards the grade of malignity exhibited in different cases, slowly corroding superficial ones, possessing this feature to a much slighter degree than the others.

Diagnosis.—As a rule, the diagnosis in most cases of epithelioma will be easy. Occasionally, however, a question will arise as to whether a certain lesion is an epithelioma, a lupus, or a sarcoma, on the one hand, or a more innocent papilloma on the other. The distinctions between epithelioma and lupus will be considered in connection with the latter disease. From sarcoma of the skin it is to be distinguished by its greater consistence, less sharply defined infiltration, and lesser vascularity and tendency to hemorrhage.

Prognosis.—The prognosis of epithelioma is unquestionably bad, not so, however, to the extent asserted by Kaposi, who says: "No matter whether an epithelial cancer has been removed by the knife or by cauterization, recurrence always takes place within a shorter or longer period of time." This statement is so extraordinary that I give his original words below.* Perhaps this has been Kaposi's experience, but almost every other surgeon can recall cases in which extirpation of the growth has been followed by complete immunity in the future. These cases, however, it must be admitted, are in the minority. *Ceteris paribus*, the earlier the nature of the disease is recognized, and the sooner it is removed, the better the prognosis.

Etiology.—There is too little known concerning the causes of epithelioma to permit any definite or dogmatic statement to be made concerning them. While in some cases the morbid growth first shows itself at points of the skin that previously appeared to be normal, in others, the cancerous development appears on the site of some long-existing and presumably innocent growth, as a simple wart or papilloma that has been subjected to frequent irritation. It also not unfrequently appears as a sequel to the graver forms of lupus, and has even arisen upon a patch of chronic eczema.

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* "Ob der Epithelialkrebs mittels Exstirpation oder Aetzung entfernt worden ist, immer kommen in kürzeren oder längeren Intervallen recidive Eruptionen." 97, 2: 463.

Treatment.—Extirpation is the first thing to be thought of, provided the case is not so far advanced that ultimate recovery is hopeless, or even temporary alleviation improbable. If an operation is admissible it should be performed as early and as thoroughly as possible. When the lesion is conveniently situated and fairly circumscribed, excision, including a broad margin of surrounding tissue, appears to me to be the most judicious procedure. When more diffuse or irregular, caustics may be employed, or excision of a part or the whole followed by the caustic application. The caustic employed may be either Vienna paste, sulphuric acid paste, one or more of the caustic chlorides, or arsenic. The former are active destroyers of tissue, but exert no poisonous influence on the system. The last is energetic to a degree, exceedingly painful, and in a number of instances its application has been followed by fatal poisoning. Of the various modes of using Arsenic that of Marsden * is perhaps the best. His method is as follows: " A thick paste of arsenic is made according to the following formula:

℞. Arsenious acid.................................. ʒ ij.
Mucilage of gum acacia........................ ʒ j.
To be well mixed together, and made into a thick paste.

"The patient's health having been attended to, the whole of the cancerous surface is to be spread over with this paste, provided it is not more than a square inch, and the paste must be sufficiently thick not to run ; a piece of dry lint is then pressed on to the part, overlapping the paste half an inch all round ; this must be left for a short period, say ten minutes, by which time any superabundant paste will have been taken up by the extra lint, which is then to be carefully cut away with a sharp pair of scissors ; in an hour, or at most two, the lint covering the paste will have become dry and hard, and it will adhere closely and firmly to the cancer. In the course of twenty-four hours the surrounding parts will commence to swell, become red, and to a certain extent inflamed, and the patient will experience a drawing pain. In general, this is by no means severe, and does not last more than one or two days. At the expiration of from forty-eight hours to three days, according to circumstances, bread and water poultices are to be constantly applied and changed every two or three hours ; the pain, redness, and swelling will by this time have subsided, and a distinct line of demarcation be seen extending entirely around the cancerous mass; the skin ulcerates, and a fissure is formed, separating the slough from the healthy tissues; the fissure continues to deepen, until the entire cancer comes away, leaving a healthy cuplike depression varying in size and depth according to the mass removed. Healthy granulations will now commence, and it will be well to continue the poultices for some time ; indeed it often happens that no other application need be used."

As regards the use of internal remedies little can be said. Besides tonics and roborants to improve the general condition, arsenic, as a specific remedy, is almost the only one that need be considered. This drug certainly appears to have been useful, and in fact curative in a few cases of presumably malignant disease, but whether these cases were genuine epitheliomata cannot be determined.

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* A New Successful Mode of Treating Certain Forms of Cancer. 2d edition, London, 1874, p. 83.

Besides the drugs mentioned the following may be considered: *Acidum Citricum*, 8; *Alumen*, 13; *Bals. Gurg.*, 30; *Carota*, 40; *Clematis Erecta*, 45; *Conium*, 47; *Galium*, 56; *Onoperdon*, 80; *Phytolacca*, 86; *Potass. Chloras*, 92; *Sedum Acre*, 105; *Silica*, 105; *Sodii Silic.*, 107; *Thuja*, 25; *Xanthox.*, 116; *Zinci Nitras*, 117, and *Zinci Sulph.*, 117.

ERYSIPELAS.

Definition and description.—Erysipelas* is an inflammatory affection of the skin, more frequent on the face than elsewhere, characterized by heat, intense redness and swelling, and a tendency to the formation of vesicles and bullæ, and usually accompanied with more or less febrile disturbance. The affection having once appeared, spreads rapidly and may involve a large extent of surface, the entire face for instance, in two or three days. It usually reaches its height in about a week, after which, if everything goes favorably, it begins to decline, and by the end of the second week or sooner, the swelling and redness will have disappeared, and the horny layer of the epidermis be in a desquamating condition. The disease almost invariably runs an acute course, and terminates in, at the most, three weeks. I have, however, seen one case in which a typical facial erysipelas did not undergo complete resolution, but continued as a subacute inflammation, with infiltration for many months. It deserved the name of chronic erysipelas.† Erysipelas sometimes attacks the same patient a number of times.

Diagnosis.—The features presented by erysipelas are so characteristic that there is little difficulty in diagnosticating the affection.

Prognosis.—The disease, in the great majority of cases, terminates favorably, in a few cases fatally.

Etiology.—Although erysipelas is a very common disease, its etiology is by no means clear. In the majority of cases careful observation has shown that it follows some lesion of continuity and, it is supposed by many, that this is always the case. In some instances, however, this previous lesion cannot be demonstrated.

Treatment.—Of the various drugs that from time to time have been advocated in erysipelas we believe that the following are the ones on which the greatest dependence can be placed.

The chloride of iron, especially in the form of an ethereal tincture,‡ has enjoyed an extended and deserved reputation, and, in the opinion of some, is the nearest approach to a specific in this affection that we possess. Its best effects appear to follow full doses.

Quinine, in doses of from three to five grains every two or three hours, is given with the view to paralyze the leucocytes and prevent their diapedesis. Thus used it certainly abates the fever, and in many cases appears to shorten the duration of the affection.

These are the two drugs on which the most confidence is placed by the majority of physicians at the present time, and their employment is of comparatively recent date. An older method, first brought into vogue by Mr. Liston, should not be forgotten. This consists in the use of aconite and belladonna,* either singly or together. In spite, however, of Liston's high encomiums, their use in this connection did not become very general, a few writers only appearing to have given them a trial. These, however, confirm Liston's statements. Fleming (**94**, 76) says of aconite: "I have employed it with marked benefit in several cases. . . . In one case of simple erysipelas affecting the leg, the inflammation, which was very severe and of six days' standing, was entirely subdued in two days; the pain having abated somewhat soon after the first dose and entirely in seven hours. In another case, also of considerable severity, the pain was entirely removed in ten hours, by which time the swelling was much reduced. Every symptom of inflammation had disappeared in thirty-six hours. . . . The treatment of the simple form of the disease may be trusted to Aconite alone, the bowels, of course, being at the same time attended to."

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* I here refer to the simple superficial variety, not to the phlegmonous form, nor to the erysipelato-cellulitis of surgeons.

† This must not be confounded with a chronic eczema often spoken of by patients as "erysipelas."

‡ *Tinctura Ferri Chlorati Ætherea* of the German Pharmacopæia.

Thompson (**83**, 96) recommends both aconite and belladonna. He administered the former, however, in a mixture with hyoscyamus, acetate of ammonia, and camphor.

Trousseau † refers to the good effects observed by others with aconite in erysipelas and adds: "These results, without being entirely decisive, seem to us such as to encourage new trials; especially in traumatic erysipelas, which is always such a dangerous complication of wounds and operations."

PHILLIPS (**2**, 59), BARTHOLOW (**4**, 285), and KÖHLER (**17**, 1009), recommend belladonna in erysipelas, the author first mentioned saying: "The forms in which belladonna may be employed to advantage are, such as are marked by superficial inflammation—inflammation, that is to say, which does not much affect the subcutaneous areolar tissue, and in which the surface is free from *vesicles*. When these are the conditions, belladonna will rapidly quell the disorder."

My own experience confirms that expressed by the authors above mentioned. For several years I have given up the quinine and iron methods of treatment in favor of that by aconite and belladonna, rarely finding it necessary to employ other means. I do not believe that aconite possesses any *specific* value in this disease, its usefulness being in relation simply to the pyrexia, and its employment should be guided by the thermometer, not by the appearances presented by the skin. Belladonna, on the other hand, does exert a specific influence on the skin, and my own practice has been to use it externally, keeping the parts covered with a piece of fine linen moistened with a solution composed of one part of tincture of belladonna, one part of glycerine, and eight parts of water.

In addition to the four drugs mentioned the following have been recommended:

For internal use.—*Digitalis*, 50 ; *Rhus Tox.*, 99; *Stachys Erecta*, 107 ; and *Xanth. Strumar.*, 116.

For external use.—*Ammon. Chlorid.*, 15 ; *Ammon. Iodid.*, 15; *Aralia Nudicaulis*, 20; *Argent. Nitras*, 21; *Bismuthi Subnit.*, 33; *Collodium*, 46 ; *Plumbi Nitras*, 89 ; *Plumbi Subacetas*, 89 ; *Potassii Silicas*, 95; and *Terebinthina*, 110.

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* Lancet, April 16, 1836. Mr. Liston stated that he obtained the idea of using these drugs from the homœopaths.

† Therapeutics, Am. Ed., 2: 271.

ERYTHEMA.

Definition and description.—Erythema consists in a circumscribed or diffused patch, or several such patches, characterized by redness, a little heat and sometimes itching. The patches may be of temporary duration only, or may persist for a considerable time. The name is not strictly applicable to any definite and particular disease, but should rather be taken in a generic sense as the designation of a symptom, implying the idea of superficial congestion. Thus the redness which follows exposure to the sun or to artificial heat has been termed *erythema caloricum;* that which follows the application of irritating substances like mustard or capsicum, has been termed *erythema ab acribus;* that which is induced by the pressure of badly fitting garments—garters, stays, pads, straps, trusses, etc.—has been called *erythema traumaticum.* These are all trivial affairs, which soon disappear when the cause which produced them no longer continues in action. There are, however, other forms of congestion or simple hyperemia of the skin that appear to be due to internal causes. Such, for instance, as the temporary flushings of the face that occur in women about the time of the menopause, and which last sometimes for a few minutes only, sometimes for an hour or more. When these are frequently repeated, the hyperemia becomes more persistent, giving rise to a chronic condition which, in time, may lead to a pronounced Rosacea.

In certain cases, dyspeptic conditions and hepatic derangements may give rise to hyperemic conditions of the face, which may, with equal propriety, be called erythema.

In addition to the foregoing there are two definite affections of the skin that have received the generic name of erythema with a qualifying addendum: I allude to the so-called *Erythema multiforme,* and *E. nodosum.* These will be considered separately.

Diagnosis.—The name erythema simply may be applied in accordance with usage to a variety of hyperemic conditions of the skin, arising from a multitude of causes, and, as before said, should be regarded rather as the designation of a symptom than as the name of a definite disease. The important point in diagnosis is to ascertain, if possible, the nature of the erythema, that is, the cause on which it depends.

Prognosis.—The prognosis will naturally depend on the etiological elements of the case, and is, of course, good when the erythema is due to temporary and external influences, and more grave when internal derangements are at the bottom of the trouble.

Treatment.—The forms of erythema that depend on temporary, external influences, require no treatment other than the removal of the cause, while those that depend on gastro-intestinal, uterine, and other internal derangements require such hygienic and constitutional measures as may be demanded by the peculiar circumstances of the case. The special treatment of the lesion, however, demands attention. In the erythematic flushings of women, Amyl Nitrite, as first pointed out by Ringer, has proved of decided service at our hands. It should be given in quite small doses, and may be administered by the mouth or by inhalation. I find the following a convenient method of administrating it internally: Take a vial of unmedicated homœopathic pellets of convenient size; pour into it sufficient amyl nitrite to cover them. At the end of a few days they will be saturated. Then turn them out on a piece of unsized paper, and permit the amyl nitrate to evaporate until they are just dry on the surface, and do not stick together, then replace them in the vial and keep for use. The pellets will absorb about one-fifteenth their weight of the drug, and, if a given number be weighed prior to medication, the amount that each will contain can be readily estimated, and the dose regulated accordingly. For inhalation take a vial of convenient size, a ladies' *vinaigrette*, for instance, fill it with the finest toilet sponge, and pour in sufficient amyl to saturate the sponge and cork tightly. A whiff or two of this is the appropriate dose. In more persistent erythemata, belladonna, as mentioned by Bartholow, sometimes proves of service.

In addition to internal treatment, local applications will prove of service in the more persistent forms of erythema. In the milder varieties the author has used both arnica and belladonna, and ergot, in ointment or lotion to advantage. In decidedly chronic cases, especially if there be any tendency to infiltration or desquamation, slightly stimulant applications should be made. The white precipitate or citrine ointments, or ointments containing one of the empyreumatic oils, will be required. Contractile collodion is also useful.

Besides the drugs mentioned, the following may be considered: *Ammonii Chloridum*, 15; *Bismuthi Subnitras*, 32; *Plumbi Oleas*, 89; *Plumbi Subacetas*, 89; *Rhus Toxicodendron*, 99; and *Stramonium*, 108.

ERYTHEMA MULTIFORME.

Definition and description.—WILLAN, the father of English dermatology, described certain cutaneous affections under the titles Erythema marginatum, E. papulatum, and E. tuberculatum; later writers added to these the expressions E. carcinatum, E. vesiculosum, etc. HEBRA has properly, we think, included them all under the general name of *Erythema multiforme*, implying an erythematous affection of multiple lesion.

The eruption may consist of patches of redness, over which circumscribed elevations also red are scattered. These elevations may be few or plentiful, and may vary from one-eighth to three-fourths of an inch or more in diameter. The small ones may, according to size, be called papules or tubercles, while the larger ones, which are always flattened, may assume the appearance of an elevated ring, around which a second or third ring may develop.

These various lesions rarely persist more than a week or ten days, at the end of which time they gradually subside and disappear, leaving after them bluish stains which last a few days longer. After the disappearance of the first eruption, or even while it is still in full efflorescence, a second crop of lesions may come out, and after this a third, prolonging the trouble in this way for several weeks or months. The eruption may consist simply of papules or of tubercles, or more frequently several or all of the lesions mentioned above may coexist in varying proportions. The favorite seats of Erythema multiforme are the backs of the hands, wrists, the feet and ankles. The eruption, however, may occur upon any part of the surface, and sometimes becomes quite general.

The outbreak of E. multiforme is sometimes characterized by prodromata of a mild febrile character, which exist for a day or two before the appearance of the cutaneous lesions, and subside as the latter develop. The subjective local symptoms are slight, and may consist in a little burning or itching at the seat of the eruption, but rarely sufficiently intense to cause much inconvenience. The eruption is more frequent in spring and autumn than at other seasons, and in some individuals exhibits a tendency to recur at these times.

Diagnosis.—The diagnosis of Erythema multiforme is, as a rule, not difficult. The polymorphic character of the lesion, and its usually localized distribution, serve to distinguish it from other cutaneous eruptions. Not unfrequently the lesions possess a livid or cyanotic aspect, due to stasis, not hemorrhage, that, taken in connection with the annular form of the larger lesions, is quite characteristic.

Prognosis.—The prognosis in this affection is almost always favorable. Recent cases, that is, of a few days' standing, may usually be brought to a speedy termination, and relapses may generally be broken up. In the majority of cases the eruption would probably run its course without treatment in a month or six weeks, but we have met with instances in which it had persisted for two or three months, finally disappearing under treatment.

Etiology.—In some cases the eruption seems to be attributable to errors of diet; in others it appears subsequent to some traumatism and in not a few it is impossible to discover anything that may be fairly regarded as standing in a causative relation. The more carefully, however, we have studied these cases, the more we are impressed with the idea that Erythema multiforme is usually a reflex affection, and closely allied to Urticaria. In two or three cases that have fallen under observation, malarial influences appeared to be at work.

Treatment.—For the last few years we have adopted the following plan of treatment (the same that we recommend in acute urticaria) with very satisfactory results. In adults, from five to ten drops of the fluid extract of Ipecac are given every ten minutes until the patient vomits. As soon as his stomach is calmed down a little and the patient feels capable of the requisite exertion, he is placed in a Turkish bath until he sweats freely. He is then shampooed in the usual manner, dried off, and put to bed. The next day another Turkish bath is taken, and, if necessary, a third. In one instance we have known the efflorescence to disappear while the patient was taking his first bath, and no further eruption occurred. In default of the Turkish bath, a wet pack or a full dose of Jaborandi might be tried. In cases of longer standing apparent benefit has followed the use of belladonna, pushed until physiological effects are developed, and quinine in full doses. Several years ago, in a case then under my care, coffee appeared to be the exciting cause, and relinquishment of this beverage was followed by permanent disappearance of the eruption. In a few cases of this sort the cause of the trouble can be discovered, and rational treatment be adopted; in many, however, this cannot be done, and we must either try purely empirical treatment or give a *placebo,* and wait for a spontaneous recovery.

ERYTHEMA NODOSUM.

SYN.: Dermatitis contusiformis.

Definition and description.—Quite different from the affection last described is the one to which the name of *Erythema nodosum* has been applied. This disease is characterized by an eruption of reddish and somewhat acuminate tumors from the size of a small cherry to that of an egg, and usually situated upon the lower extremity between the knee and ankle. The number of tumors varies. There may be but half a dozen of them when the affection is confined to the lower extremities, or two dozen or more when diffused over other regions as the abdomen and upper extremities. Not unfrequently the affection is ushered in by slight fever, which subsides as the eruption develops. At first the swellings are a little painful and tender on pressure, with a feeling of tension in the affected parts. The color is at first a light red, as from an active hyperemia ; it soon becomes darker, however, and assumes a purplish tinge which gives place to a yellowish green, that in time fades away with the diminution of the swelling in the course of ten days or two weeks. The appearance presented is very like that of a bump on the forehead, so common in childhood as the result of a slight blow. It is this aspect that has given it the name of *Dermatitis contusiformis.* The tumors may not all appear on the first day of the eruption, but may take two or three days before the crop is all out. As the first crop subsides, a second may appear, as in the case of *erythema multiforme,* and even a third or fourth, prolonging the affection in this way for six weeks or two months. A high degree of inflammatory action is not commonly met with, and resolution by gradual absorption is the usual termination; but suppuration and ulceration have been observed in scrofulous cases by HARDY. PURDON also records (**123**, June, '72) an instance of this.

Erythema nodosum is peculiarly an affection of young adults from the ages of twenty to thirty, and most observers have encountered it more frequently in the female sex. It is very frequently accompanied with menstrual derangements, and sometimes would seem to be connected with rheumatism.

Diagnosis.—The features of the disease are so characteristic that no difficulty need be experienced in diagnosis. In its declining stages it might, from its aspect alone, be mistaken for multiple contusions, but the history of the case would eliminate any doubt on this score.

Prognosis.—The prognosis is uniformly good, except in the rare cases in which suppuration ensues.

Ætiology.—The frequent occurrence of Erythema nodosum in connection with menstrual derangements may be purely accidental, or the former may stand in a causative relation to the latter. We are inclined to adopt the latter view, especially as we have met with a case in which the affection occurred within a few days after the patient had purposely stopped the menstrual flow by vaginal injections of cold water. Its connection with rheumatism has also been insisted on by some, and certainly requires further investigation. It is perhaps met with in persons of robust health, but certainly occurs more frequently in those who are anæmic and debilitated.

Treatment.—HEBRA says that as the disease will get well of itself in time, there is no special necessity for prescribing any treatment whatever, but if the patient insists on something being done, cold or warm applications with, perhaps, the addition of a little Goulard's extract may be ordered. The question in treatment, however, is not as to whether a disease will terminate by spontaneous recovery, but whether its course may be shortened, and the pain or other inconveniences of its presence may be lessened. This, I believe, can be done in the affection under consideration. Seen at the commencement, if there be the slightest febrile action, or elevation of temperature, aconite in apyretic doses should be given and continued for at least a couple of days; later, iron in moderate quantities is of service, and, perhaps, also the mineral acids. Locally, I apply compresses of Hamamelis for the first few days, to be succeeded by Arnica (root) as the lesions begin to assume the appearance of a bruise. An elastic bandage materially hastens the resolution of the tumors.

SPENDER recommends (**135**, 4 : 19) a combination of sulphate of iron with a dilute mineral acid and very mild saline purgatives. He thinks that quinine and strychnine do little good by themselves in this affection but may assist the hematic powers of iron. Locally, he supports the limb with a flannel bandage, applied with considerable pressure. This is employed for purposes of compression, as well as for its calorific properties. Every third or fourth day the bandage is removed, and the limb shampooed with a lather of soap and hot water. Salt-water bathing is also recommended.

WILSON says (**77**, 128) that the affection requires antiphlogistic regimen, a brisk purgative of calomel and colocynth at the commencement, then tonics and the mineral acids. As a local application, the nitrate of silver has been recommended by CHAPMAN (**138**, '37).

FAVUS.

SYN. : Tinea favosa; Porrigo favosa.

Definition and description.—Favus is a parasitic affection of the skin, characterized by the development of pale yellowish crusts, in connection with the hairs and their follicles. It is more frequent on the scalp than elsewhere, but may be met with on any part of the body that is supplied with hair. It usually commences by the appearance of small white specks or points. These gradually increase in size, become yellower in color and umbilicated, forming small crusts, the umbilication being traversed by a hair, or if the hair be absent, will be found to correspond to the mouth of a hair-follicle. The crusts slowly augment and project somewhat above the level of the skin. If one of them be removed, it will be found to have somewhat the form of a concavo-convex lens, its upper surface having a marked depression or concavity surrounded by an elevated border. Its under surface is convex and the convexity will be found to correspond to a small depression in the skin from which it was removed. Other crusts appear in the neighborhood or scattered over different parts of the scalp, and gradually increase in size; contiguous ones join by mutual extension, so as to form a mass of considerable proportions mottled over with little depressions perforated by hairs. As the disease further advances, portions of the crusts drop off, carrying with them some of the hairs. Ultimately the crusts disappear, leaving a surface at first somewhat reddened but afterward white, dry, atrophied and cicatricial in aspect and deprived of hair. The progress of the disease is slow, and when uninterfered with by treatment, may last for ten or twenty years before it completes its course, which it will do when it has permanently destroyed all the hairs of the affected region. Favus of the scalp attacks children by preference, being but rarely found in adults as a recent affection. It is highly contagious and may be transferred directly from one to another, or by means of caps, brushes, etc. This affection is not confined exclusively to the human race, but in some instances appears to originate in the mouse.

Cats which catch mice diseased in this manner become infected from them, and children playing with the cats contract the disease in turn from the atter.

Favus is not limited to the scalp, but may appear upon any part of the body. When it occurs upon parts furnished with but fine and rudimentary hairs, as the general surface, it commences as a small, red, very slightly raised spot. This enlarges and becomes a little scaly until it has reached a diameter from half an inch to an inch. Upon this reddened patch one or more small white points, not larger than pin-heads, appear. These increase in size and develop into the characteristic sulphur-yellow umbilicated crusts. This epidermic Favus appears to attack adults as freely as children.

Favus is usually accompanied with a certain amount of pruritus, rarely severe, which leads to scratching and the mechanical transfer of the disease from one part to another.

Diagnosis.—When in the stage of full development, there is no difficulty in the diagnosis, the sulphur-yellow, dry and friable umbilicated crusts being sufficiently characteristic, and not counterfeited by any other affection. In the very earliest stages, before the appearance of the white specks, an absolute diagnosis is almost out of the question. When the specks appear, their examination with the microscope will immediately settle the matter. In favus of the general surface, the erythematous disk that first appears closely resembles trichophytosis, and it is only later when the white specks appear that the nature of the disease can be readily determined. Known sources of contagion will often assist in clearing up the matter.

Prognosis.—The prognosis of favus, when it affects only the less hairy parts of the general surface, is always good. The disease can then be readily cured, and in a short time. When on the scalp, however, the case is different. In this region it proves exceedingly obstinate, and it is only by the most judicious and unremitting attention that the disease can be radically cured.

Ætiology.—Favus is caused by the lodgment and development of a minute fungus upon the surface and in the hair-follicles. This fungus has received the name of *Achorion Schönleinii*, after its discoverer. It consists of round or ovoid spores, about $\frac{1}{3000}$ of an inch in diameter, together with tube-like structures called mycelium, some of which are simple, others branched; some contain spores and others are empty. In addition there is a considerable amount of fine granular matter. The appearances presented under the microscope are shown in Fig. 8.

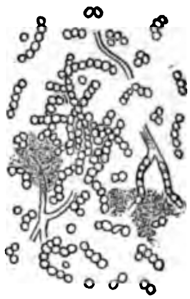

FIG. 8.—Achorion Schönleinii.

The spores penetrate deeply into the hair-follicle, even to the bottom, where their further multiplication causes destruction of hair-root and finally of the papilla. They sometimes invade the bulbous portion of the root itself, but rarely to any extent, and probably never involve the free portion of the shaft. When the growth has filled the follicle it appears at its orifice as the white speck already alluded to, and by further increase constitutes the substance of the typical crusts.

Treatment.—There is an almost universal consensus of opinion as to the proper treatment. It may be premised, however, that prior to the year 1840, the disease was considered well-nigh incurable by the scientific dermatologists of the day. The best results were obtained in France by a couple of quacks, known as the *Frères Måhon.* Their procedure was, after cutting the hair quite short, to apply a large pitch-plaster to the scalp. When this became firmly attached to the hair it was forcibly removed, bringing most of the hair with it. Ointments were then applied and many cases were cured. The objections to this method, however, were serious. The violent tearing off of the plaster caused a great deal of pain, and sometimes small portions of the scalp were torn out, and more than one death resulted from the operation. When SCHÖNLEIN, however, ascertained the true nature of the disease, the philosophy of the Måhon treatment became apparent. It only remained to apply it in a less cruel and more scientific manner. This may be accomplished as follows: Let the scalp be oiled twice a day for two or three days. Then with a small spatula remove all the superficial crusts. Some of them will be found quite adherent, but a dull-pointed knife-blade and a little patience, will be all that is required. If, now, a mercurial or sulphur ointment be applied, the disease will be prevented from showing itself on the surface, and will be, *to all appearance*, cured. If these applications, however, be discontinued under the supposition that the disease is in reality cured, a few weeks will suffice to dissipate this error, as the disease will reappear, and in a short time be in as bad a state as before treatment, due to the fact that the hair-follicles still contain the spores in abundance. It is necessary, therefore, to destroy them *in situ*, by the aid of such medicinal agents as will, by local contact, put a stop to their further development and growth. These medicinal agents are called *parasiticides*. In order to destroy the spores, it is necessary that the drug made use of shall gain entrance to the follicles, which it cannot do if they are blocked up with the hairs. Removal of the hairs then becomes necessary. This is effected by epilation, or removing the hairs one by one with a pair of suitably constructed forceps (Fig. 9).

If the disease is at all extensive, epilation of the entire surface at one sitting is impracticable. The best way is to proceed systematically and remove *every* hair from a limited area—say one or two square inches. When the patience of the surgeon or of the patient is exhausted, desist for the time and apply to the denuded spot a suitable ointment or lotion. For this purpose nothing is more convenient than a one-half to one per cent. solution of bichloride of mercury in water. The follicles, deprived of their hairs, permit a ready entrance of the solution, which, coming directly in contact with the spores, destroys them, or perhaps simply kills the epithelium of the inner root-sheath, which, when exfoliated, carries with it the infiltrating fungus. On the following day another portion of the scalp is epilated and the lotion applied as before, to the portion just denuded and also to that previously operated on. This procedure is repeated day by day until the whole of the affected region has been deprived of hair. If, now, *all* the hairs have been extracted and the lotion has effectively destroyed the intrafollicular fungus, the disease is, of course, at an end.

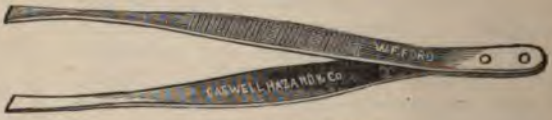

FIG. 9.—Epilation forceps.

Such a result, however, is rarely attained so easily, as many hairs will be broken in the attempt at extraction, and many spores will escape the action of the parasiticide. These, of course, would constitute new foci of disease. It is, therefore, necessary to continue the use of the parasiticide until the broken hairs have grown to a sufficient length to again permit of an attempt at their extraction. After a week or so, the epilation should be resumed, and repeated a third or fourth time if necessary. Finally, if the growing hairs appear to present a healthy aspect, treatment may be temporarily suspended. The patient, however, must be kept under close observation, and the first indications of relapse immediately taken in hand.

In Favus of the general surface, epilation and the elaborate treatment just mentioned are unnecessary, as the disease can be readily cured by much simpler means. If at the commencement, when the erythematous disks only are apparent, a few applications of the tincture of iodine will be sufficient to dissipate the disease. If later, when the crusts are present, these should be picked out with the point of a knife and the iodine freely applied. After sufficient has been used to secure thorough desquamation of the epidermis, it will usually be found that the disease has been cured.

In many, if not most cases of Favus, it will be found that the general health is below par. Under these circumstances, *constitutional* treatment will be advisable. The drugs most frequently indicated are cod-liver oil and iron.

Besides the drugs mentioned, the following may be considered: *Calcii Sulphidum*, 35; *Hydrarg. Nitras*, 16; *Hydrarg. Oxid. Rub.*, 67; *Manganesii Oxid. Nig.*, 75; and *Plumbi Iodidum*, 89.

FURUNCLE.

Definition and description.—A furuncle, or "boil," is a small or moderately sized, red and painful inflammatory elevation of the skin. Its first appearance is usually heralded by a sharp stinging sensation followed by pruritus. A papule then appears and gradually increases in size and becomes hard and painful. In a day or two a whitish point appears at the apex. This small collection of pus enlarges until nearly the whole tumor becomes purulent, constituting a small abscess. Later, this little abscess bursts and discharges its pus, and, in addition, a firm cylindrical, whitish substance, commonly termed the "core." Reparative action then commences, and recovery takes place, with a depressed scar varying with the size of the boil. Furuncles may occur singly, or successively, or in crops of three or four at a time, and a succession of crops keep up the trouble for several months or longer.

The *diagnosis* and *prognosis* of Furuncle are familiar to all.

Etiology.—Boils were formerly regarded as evidences of excessive good health, or as the results of high living and overfeeding, and a crop of them was looked on as a good sign, and they were even spoken of as "healthy" to have. This view is now quite abandoned, and furuncles are more generally regarded as evidence of depraved nutrition; their exciting cause, however, is unknown.

Treatment.—The indications for treatment are to relieve the existing furuncle and to prevent the occurrence of others. If a furuncle be seen at the very commencement—that is, while it exists simply as a papule, before the formation of pus—it may be often aborted. This may be accomplished by touching it with a white-hot needle, or sharp point of a Paquelin cautery. Instead of the actual cautery, nitrate of silver may be applied. The part should be first washed clean, to remove grease, etc., from the surface, after which the solid stick should be thoroughly applied. This treatment, when adopted sufficiently early, usually prevents the further development of the furuncle. If pus has already formed, the boil should be allowed to go on to maturity without surgical interference. A little belladonna or stramonium ointment may be applied to ease the pain, and a warm poultice to hasten maturation. When fully "ripe," if it has not already opened, it may be incised and the contents evacuated. It should then, if possible, be dipped in water as hot as can be borne for ten or fifteen minutes, then dried and the cavity filled with a little pellet of absorbent cotton or marine lint, over which should be placed a piece of sheet lint smeared with a little simple cerate or, better, perhaps, equal parts of stramonium and resin ointments. The boil should not be poulticed after opening. It has often been noticed, when a boil is freely poulticed after opening, that a number of fresh ones appear in the vicinity. I presume that this is due to a little of the pus gaining entrance to the sudoriparous or sebaceous follicles and, by its irritant properties, exciting furuncular inflammation. A furuncle should never be opened prematurely. The core or slough remains attached by its deeper extremity for some time, and, until this is loosened and discharged the boil will not heal. If prematurely opened the pus is discharged, but the core remains attached much longer than if the furuncle were permitted to fully mature.

The constitutional treatment will involve the use of remedies called for by any manifest impairment of health, and particularly iron, quinine, and the mineral acids. The prophylactic or, as it might be called, the specific treatment, intended to break up and remove the tendency to furuncular inflammation, calls for the employment of a different class of drugs.

Among these the sulphite of sodium, in twenty-grain doses two or three times a day, has been highly recommended. Personally, I have used to advantage the "syrup of the hypophosphites" in dessertspoonful doses three times daily. Just at present the drug most in vogue is the Sulphide of Calcium, borrowed from the homœopaths by Ringer, and greatly popularized through his writings. There is no doubt, however, as to its efficacy. It should be given in $\frac{1}{10}$ grain doses four or five times a day.

Besides the drugs mentioned, the following may be considered: *Acidum Carbolicum*, 6; *Acidum Sulphuricum*, 11; *Arsenic*, 25; *Fermentum*, 53; *Hydrastis*, 68; *Pix Liquida*, 88; and *Sulphur*, 109.

HERPES.

Definition and description.—Under the general name of Herpes may be included affections characterized by the development of a cluster of small vesicles, on a slightly if at all inflamed base, and usually located on, or in the neighborhood of mucous membranes.

There are two principal varieties of Herpes, which, as they differ so markedly in their nature and behavior, will be considered separately. These are H. *labialis* and H. *progenitalis*.

HERPES LABIALIS.

Definition and description.—The vesicles of Herpes labialis are small in size, not usually exceeding one line in diameter. They are situated on a reddened and slightly inflamed base, appear upon either the upper or lower lip or upon both, or clustered about the angle of the mouth. The vesicles usually rupture on the second or third day, leaving a denuded surface. If the serum which filled them is not wiped away it dries into a thin transparent scale or crust. This remains attached for a day or two longer and then drops off, leaving a slightly reddened mark, which gradually fades away, without leaving any trace behind. The eruption may be unilateral or bilateral, more frequently the former. The affection is rarely painful, a little heat or pruritus being usually the extreme limit of inconvenience.

Diagnosis.—The only affections with which Herpes labialis are likely to be confounded are, first, a well-defined disease known as Zoster, and second, certain anomalous vesicular affections which are included under the provisional name of Hydroa. The differential diagnosis between Herpes labialis and Zoster is best appreciated by an analytical comparison of the two:

Herpes.	*Zoster.*
Is frequently bilateral.	Is unilateral (with very rare exceptions).
May attack frequently.	Occurs but once in a patient's life (with rare exceptions).
Little pain, but slight sensation of heat or itching.	Neuralgic pain, often severe in the course of one of the nerves underlying the eruption.
Vesicles small.	Vesicles large.
Fluid usually transparent.	Fluid often opaque.
Vesicles usually rupture in a day or two.	Vesicles often persist until the fluid is absorbed.
Duration four to ten days.	Duration two to four weeks.
Lesion superficial.	Lesion deeper, often extends to the corium.
Never leaves cicatrices.	Often leaves cicatrices.

Prognosis.—The affection is a trivial one and the prognosis is always good.

Ætiology.—Herpes labialis often occurs at the close of some mild febrile affection or during the course of an acute catarrhal one, and has received the common names of "fever-sore" and "cold-sore." Beyond this we know nothing as to its etiology.

Treatment.—Herpes labialis usually requires little, if any treatment. At most a drop or two of tincture of camphor, or a little simple dusting powder may be applied, if the surface is moist or weeping. Some persons are more subject to the affection than others, that is, they have an attack on the slightest provocation. If this tendency to frequent attacks could be controlled, it would be a great convenience to them. Unfortunately I do not know of any means of doing it.

HERPES PROGENITALIS.

Definition and description.—This affection is characterized by the development of crops of vesicles on the genital organs. It is most frequently met with on the penis, and occurs either on the integumentary surface or on the adjoining mucous membrane. The vesicles resemble those of herpes labialis, and when seated upon mucous membrane rupture in a few hours, or a day perhaps, after their appearance. On rupture they leave little excoriations or ulcers which, if the patient's health be good, heal in a few days. In other cases the ulcerations may extend, neighboring ones unite and give rise to a condition that may readily be mistaken for venereal sores. One of the favorite tricks of charlatans is to inform the patient that they are of venereal origin, in fact, a manifestation of syphilis, and milk his pocket accordingly.

A peculiarity of herpes progenitalis is the tendency to frequent relapses or returns of the affection. The first attack having disappeared, another may occur in six weeks, two months, or later, and this be followed by others at somewhat irregular intervals, the disease in this way continuing to annoy the patient for several years. The vesicles are not, as a rule, accompanied with much pain. Sometimes there is a little itching, and, after rupture of the vesicles, a little soreness if the organ be roughly used.

In the female the vulva may be the seat of a similar affection, usually termed *herpes vulvaris.* It pursues the same course as in the male, and a relapsing form is sometimes met with.

Diagnosis.—The diagnosis of Herpes progenitalis is not always easy. A simple unirritated herpes should not be mistaken for anything else, as the absence of all induration is usually sufficient to exclude chancre, at least in the male. The absence of purulent secretion in like manner excludes the chancroid. Where, however, the herpes has been irritated, little ulcerations with free secretion may closely simulate chancroids, and also a form of chancre described by the French as "multiple herpetiform chancre." In these cases it may be extremely difficult to positively determine the true nature of the lesion in question, time alone declaring this with certainty.

The diagnosis between Herpes progenitalis and Zoster should not be difficult. This latter affection rarely invades the genital regions, but when it does so it possesses its ordinary characteristics, namely, clusters of vesicles on inflamed patches of integument, accompanied with neuralgic pain.

Prognosis.—The prognosis of simple herpes preputialis or vulvaris is always good, so far as the present attack is concerned, as a week usually suffices to end the matter. The prognosis as regards relapse, however, is not so good, and cannot be declared with any certainty. That is, at the first attack it will be impossible to say whether others will occur, and if they do whether the tendency to relapse will be overcome by treatment.

Etiology.—The etiology of Herpes progenitalis is obscure. It is not a febrile affection like Herpes labialis, nor is there any reason to believe that it depends on any grave nerve-lesion as in Zoster. The individual attacks usually appear to be excited by peripheral irritation (phymosis sometimes) but the relapses are often unexplainable.

Treatment.—The treatment of this form of herpes involves the use of means calculated to relieve the existing eruption, and to prevent relapses. As regards the temporary treatment nothing, as a rule, is required beyond cleanliness and the application of a little simple dusting powder. If ulcerations are present, a little stimulating ointment, as one containing a small quantity of balsam of Peru, or the *Ungt. Resinæ*, may be employed.

The prevention of relapse is a much more difficult matter. The affection not unfrequently occurs in persons with a phymosis or a redundant prepuce. I have known of two cases in which curtailment of the redundancy put a stop to the recurrence of affection. In others the mucous membrane of the balano-preputial region is very delicate and sensitive. In these cases much benefit will accrue from a systematic application of astringents, tannin, catechu, etc., with a view to toughening the membrane. Thus far, in my own hands, internal medication has failed to prove of any certain service, except that in a few cases quinine, in full doses, has appeared to control the disposition to relapse.

HYPERIDROSIS.

Definition and description.—Hyperidrosis is a term used to designate the condition characterized by excessive sweating. It may be either general or local, that is, the patient's entire body may be bathed in profuse perspiration not due to the effects of heat or violent exercise, or half his body may be so affected, or single parts, as the hands or feet, may alone be involved. The general form occurs in connection with Phthisis, malaria, certain debilitating diseases, etc., and does not specially concern us from a dermatological standpoint. The more localized forms, however, as of the feet and hands, not infrequently demand attention. The characteristic symptom is of course the presence of an excessive amount of fluid on the affected surfaces, and is usually accompanied with a sensation of coldness in the parts. In addition they sometimes exhibit the macerated and wrinkled appearance that is common in washerwomen, etc., after prolonged immersion of the hands in water. In some instances the hyperidrosis is not accompanied with the development of any bad odor; in others the perspiration appears to undergo rapid decomposition, and we have, in addition, the affection termed bromidrosis, which has already been considered.

Diagnosis and prognosis.—The diagnosis of hyperidrosis is of course simple, and its prognosis is usually favorable, that is, the condition can generally be relieved, if sufficiently active measures are adopted.

Etiology.—In general hyperidrosis depending on Phthisis, etc., the etiological factor seems to be general debility. In localized hyperidrosis, however, the connection between it and internal conditions is not so clear. According to Adamkiewicz,* localized sweating may be produced, as, for instance, on the paw of a cat, by faradization of the sciatic nerve, and even after the cat has been killed. This would indicate what we very well know, that the perspiratory, like the other secretions, is under the control of the nervous system. Beyond that statement, however, we cannot go ; we are as yet unacquainted with the nature of the derangements of special nerves that are capable of inducing localized hyperidrosis. If we did we might possibly devise remedial measures that would seem more rational than those at our present command.

Treatment.—In Belladonna or its alkaloid, Atropia, we have a drug which, given in sufficiently large doses will probably control, temporarily, at least, any case of general or local hyperidrosis that we are likely to encounter. The question of the expediency of giving this drug, however, must be determined by the circumstances of each particular case. The temporary suppression of the perspiration may be doubtless maintained for a considerable period by repeated large doses, but whether it is desirable to keep the patient in a state of chronic belladonna poisoning, each practitioner must judge for himself. Personally I have never attempted it, and have never seen the administration of belladonna in this connection at the hands of others, followed by permanent good results. In direct contrast with belladonna, **Ringer** has seen semilateral sweating, and **Engel** general hyperidrosis controlled by Jaborandi (see Pilocarpus, p. 86), administered in small doses.

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* Die Secretion des Schweisses, u.s.w., Berlin, 1878.

Leaving general hyperidrosis, and turning our attention to the localized form, we find that the whole array of astringents have been employed, but, as a rule, with but very moderate success.

The writer, however, has used, during the last eighteen months, with very satisfactory results, local applications of freshly precipitated silicic hydrate, as mentioned in connection with bromidrosis.

Hebra states that he has obtained uniformly good results in hyperidrosis of the feet by a method devised by himself, and described as follows:

"A certain quantity of the simple diachylon plaster (*Emp. Plumbi*) is to be melted over a gentle fire, and an equal weight of linseed oil is then to be incorporated with it, the product being stirred till a homogeneous mass is produced, sufficiently adhesive not to crumble to pieces. This is then to be spread over a piece of linen, measuring about a square foot. The foot of the patient, having been first well washed and thoroughly dried is now to be wrapped in the dressing thus prepared. Pledgets of lint, on which the same ointment has been spread, are also to be introduced into the space between each pair of toes, to prevent their touching one another; and care must be taken that the foot is completely covered, and that the dressing is accurately in contact with the skin. When this has been done an ordinary sock or stocking may be put on the foot, and outside this a new shoe which must be light, and should not cover the dorsum of the foot. After twelve hours the dressing is to be removed; the foot is then not to be washed, but must be wiped with a dry cloth, or some of the above named" (absorbent) "powders may be applied to it. The dressing is then to be renewed in the same way as before, and its application is afterward to be repeated twice a day.

"This procedure must be continued for from eight to twelve days, according to the severity of the case. During this time, however, the patient need not keep his room, but may go on with his business as usual. At the end of this period the dressings and pledgets are to be removed, the foot is again to be rubbed with some pulverulent powder substance, and the patient may then be allowed to wear his ordinary shoes and stockings.

"In the course of a few days it will be found that a brownish yellow layer of cuticle, about one-half line thick, is beginning to peel off from all those parts of the skin which were before affected with the disease, and a healthy, clean, white surface of epidermis is exposed, as this substance separates.

"When this layer of cuticle has been completely detached, the foot may, for the first time, be washed, but it will be for some time advisable to dust some pulverulent substance into the stocking, or rub it into the skin of the foot.

"After the lapse of a fortnight or three weeks from the first application of the dressing, the hyperidrosis will generally have disappeared, and the cure will last for a year or longer, or may even be permanent. In quite exceptional cases, however, it will be found that a single course of this treatment is not sufficient to effect the complete removal of the complaint. The whole procedure must then be gone through a second time; but this will, and without exception, bring about a cure."

Solutions of chloral hydrate, and absorbent powders containing salicylic acid have also been found useful.

ICHTHYOSIS.

Definition and description.—Ichthyosis is an affection characterized by an excessive development of the horny layer of the skin. As a rule it first manifests itself within a few months after birth by a preternatural dryness and roughness of the integument. This gradually increases until it is plainly seen that a marked change has occurred in the epidermis, which slowly thickens until at last the entire skin, or a portion of it, is found covered with a thick scaly coating adhering firmly, but divided by cracks and fissures into small, irregular areas. On removal of these thickened masses we do not find much change in the color of the skin, but simply a dry, sometimes slightly reddened surface, marked by exaggeration of the normal skin-lines.

In the beginning, when merely dry, and with but very moderate epidermic hypertrophy, the prevailing color of the skin, in cleanly persons, is light, although there appears to be some increase of pigment in the cells of the rete. Later, as Ichthyosis advances, the color of the surface changes, becoming tawny, dark, and at last almost black. This is due not so much to pigmentary discoloration of the skin proper, as to accumulation of dust and dirt among the epidermic scales. A remarkable peculiarity of this disease is the diminution or absence of perspiration. In many cases, this function is merely diminished, in others it appears to be almost totally absent. This is undoubtedly due either to congenital absence of many of the sudoriparous glands, or to their faulty development or early atrophy. In one case that I carefully examined, it was impossible to detect, with an amplifying power of twenty diameters, any trace of the little depressions in the papillary ridges of the palmar surfaces of the hands and fingers, which correspond to the mouths of the sudoriparous follicles, and which are so distinctly visible in the normal skin. At most, minute points of pearly lustre, not depressed, were observed in the situations where the sweat-tubes should have opened. Upon the finger-tips alone were found a few normal tubes capable of properly discharging their function.

Course.—The course of Ichthyosis is progressive, a spontaneous cure rarely if ever occurring.

Diagnosis.—In advanced cases the diagnosis is not difficult, as the features of the disease are so well marked and sharply defined. The only affections that it at all resembles are Psoriasis, Pityriasis, and Xeroderma. In Psoriasis we find the eruption more patchy, and learn from the history that it developed from numerous small isolated foci. In Ichthyosis, on the other hand, the eruption is more diffuse, and although more marked in some situations than in others it never exhibits the sharp circumscription met with in psoriasis. When the scales of psoriasis are removed, we find that they reposed on an infiltrated base to which they were firmly attached. The attachment is usually so close that slight oozing of blood follows its separation. This is not the case in Ichthyosis. Mild cases may sometimes resemble pityriasis at first glance, but in this latter affection there is a free furfuraceous desquamation not met with in the former. Xeroderma simply means *dry skin*, and the name has improperly been applied to mild cases, or early stages of Ichthyosis. It should be reserved as the name of a condition or symptom only, and not as the name of a distinct disease. Conditions are not unfrequently met with for which the term may be appropriately employed, but which are not, and will not become, genuine Ichthyosis.

Prognosis.—The prognosis of this affection is always grave. I am not aware that it is in any way prejudicial to life, but it rarely if ever disappears or is radically cured. The most that the patient has a right to expect is temporary amelioration.

Etiology.—We know that in many cases the affection is hereditary and runs in families; beyond this its etiology is obscure.

Treatment.—Treatment is wholly palliative. A perfect cure may generally be considered out of the question with our present means of treatment, and the most that we can hope to do is to ameliorate the patient's condition and to free him, to a greater or less extent, from its inconveniences. The first indication is to remove the thick masses of epidermic accumulation. The most prompt change that I have ever seen in this respect followed the use of daily drachm doses of fluid extract of Jaborandi. In two weeks the patient's skin was perfectly free from scales, was almost as soft as in health, and was only distinguishable from the normal condition by the exaggeration of the skin lines. How long this beneficial change continued I do not know, as the patient was shortly after lost sight of.

Lombroso reports a case of Ichthyosis cured by the daily administration of thirty grains of *Ustilago maidis* continued for four months, the treatment being suspended for one or two days in each week. The physiological action of the drug readily explains this effect. Although the result in these cases was unmistakable, I question whether it is prudent or right to continue either of these drugs for any great length of time.

Our main reliance, then, will be on local treatment. This may be initiated by a wet-pack administered as follows: The pack is prepared by placing four or five thick double blankets on the floor or bed. A cotton sheet is then wrung out in hot water and laid upon the blankets. The patient, in a nude condition, lies upon this, and the sheet and blankets are then wrapped snugly around him and retained in position with straps. The head alone protrudes and is supported by a suitable pillow. In this uncomfortable position the patient remains for two or three hours or more if he be not too seriously incommoded by his close quarters. The effect of the pack is to promote the exhalation of fluid from the surface of the skin, which macerates and loosens the scales. After the pack is over, the surface is dried and thoroughly anointed with some bland oil—purified cocoa-nut oil being the nicest application of the sort that I know of. The following day the pack is repeated in the same manner, and if necessary a third is taken. After this a thorough scrubbing with warm water, an alkaline soap, and a suitable brush will remove most if not all of the scales, leaving the skin comparatively smooth, but red and somewhat sore. Emollients should now be employed daily, and, if circumstances permit, a thorough inunction night and morning, or at least once a day, will do much to retard the re-establishment of the affection.

IMPETIGO CONTAGIOSA.

SYN.: Porrigo.

Definition and description.—Impetigo contagiosa is a contagious affection of the skin, characterized by the appearance of vesicles subsequently drying into peculiar crusts. It commences not unfrequently with constitutional symptoms of a pyrexial character, varying in severity in different cases. In two or three days, one or more small vesicles may appear upon any portion of the cutaneous surface. These gradually enlarge for a few days, then dry into thin light yellowish or straw-colored scabs or crusts. The vesicles and crusts may be indefinite in number, and successive eruptions may prolong the disease for several months. During the progress of the affection, associates—adults as well as children—may contract it. Inoculation with the fluid contained in the vesicles will give rise to similar lesions.

Removal of the crust reveals a slightly reddened surface, with very little or no moisture, and no ulceration or even erosion of the surface, the lesion being extremely superficial. After the spontaneous fall of the crust, a bluish-red macule or stain is left, which gradually fades away.

The affection sometimes follows shortly after vaccination, generally within the second or third week after falling of the crust.

Diagnosis.—The diagnostic features of this affection are specially dwelt on by TILBURY FOX, who gave it the name it now bears. "They are," he says, "its apparently epidemic character in many cases; the antecedent febrile condition; its attacking children;* the origin from isolated vesicles, which tend to enlarge into blebs and to become pustular, the bleb having a depressed centre, and it may be a well-defined, slightly raised, rounded edge; the *isolation* of the spots; the *uniform* character of the eruption, and its general and scattered condition; its frequent seat and commencement about the face or head; the circular, flat, granular, yellow crusts, looking as if stuck on; its contagious nature and inoculability, its frequently following in the wake of vaccination; the absence of pain, and especially troublesome itching at night."

The affection is to be differentiated from eczema, pemphigus, echthyma, scabies, and syphilis, for all of which I have known it to be mistaken.

Prognosis.—The prognosis is good, as the affection is readily amenable to appropriate treatment.

Etiology.—The disease is eminently contagious, and I believe the contagious element to be a fungous growth which is plentifully distributed through the crusts. The same fungus is found in vaccine crusts, which explains our ability to trace the affection in so many cases to a recent vaccination. I have elsewhere (**155**, June and July, '72) given in detail the evidence on these points.

Treatment.—The treatment of this affection is exceedingly simple; all that is necessary is to remove the crusts and to apply a mercurial or a sulphur ointment, two or three times a day, and in a short time all traces of the affection will disappear, except the macules, which mark the previous site of the eruption. These gradually fade, and ultimately the skin assumes a normal aspect, without mark or scar.

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* I have seen it in adults.—H. G. P.

INTERTRIGO.

SYN.: **Erythema intertrigo.**

Definition and description.—This is an affection of the skin that sometimes arises in consequence of prolonged contact of two cutaneous surfaces. It is more frequent in infancy and at an advanced age, than during the intermediate periods of life, and occurs more especially in those possessed of a superabundance of adipose tissue. In fat children the skin of the abdomen, particularly in the inguinal regions, is frequently in contact with that of the thighs. In these cases the cutaneous secretions, insensible perspiration, etc., instead of passing off in a state of vapor, remain fluid. This fluid undergoes decomposition, resulting in the formation of certain highly irritating substances. The epithelium of the part being moist and macerated, affords little protection against these acrid bodies, and they consequently, in a short time, provoke an intense congestion, accompanied sometimes with a certain amount of thin serous exudation. If this condition is unrelieved the epidermis becomes eroded, and even ulcerations may form and extend through the entire thickness of the skin. The ulcerated parts secrete a thin, sero-purulent matter, which mingles with the other cutaneous secretions. The affection is not always confined to the parts mentioned, but may occur whenever two cutaneous surfaces are in apposition, the favorite locations being the fold between the thigh and the genitals, and under the chin in fat, short-necked babies.

In stout, elderly men, but more frequently in elderly women, intertrigo is also met with, the pendulous breasts and abdomen being in almost perpetual contact with the surfaces that they overhang.

Diagnosis.—The affection is so common that no difficulty is ever likely to arise in its diagnosis. Occasionally, however, it is masked by an Eczema, coming on in those predisposed to that affection, as a consequence of the irritation from the Intertrigo.

Prognosis.—Favorable.

Treatment.—In mild cases little more is required than the separation of the parts by the insertion of a fold or two of linen, dusted over with some inert absorbent powder, such as equal parts of starch and lycopodium. The affected skin should be frequently washed with a little tepid water, and thoroughly dried before the application of the powder. In more severe cases, astringent applications, containing a little tannin, may be required. If ulceration be present, decided stimulants may be used, as solutions of Sulphate of Zinc, Nitrate of Silver, etc., in addition to the means already indicated. The principal indications for treatment in all cases are to keep the parts clean and dry, and unless these are attended to, even after the affection is controlled, there is every probability of a relapse.

In addition to the foregoing, the following drugs are sometimes of service: *Calcii Carbonas*, 34; *Bismuthi Subnitras*, 33; *Collodion*, 46; *Sodii Boras*, 74; *Zinci Carbonas*, 116.

KELOID.

SYN.: Kelis; Cheloid.

Definition and description.—Keloid is characterized by the development upon the skin of one or more flattened smooth-surfaced tumors of varying size and shape. In some cases the natural color of the skin is maintained, but in others it is heightened, and in still others may be a little paler than normal, even quite white, and presenting a cicatricial aspect. Sometimes arms or processes project from the main body of the tumor and extend as thin bands into the surrounding skin.

Varieties.—Authors usually designate two kinds of Keloid, the *true* and the *false*, assigning the former name to those cases that arise spontaneously, and the latter to such as develop subsequent to a wound or other irritation of the skin. This division might be wise from an etiological point of view, if we were always able to distinguish between the two by their aspect or course. This, however, we cannot do. We know as a fact that the so-called false or spurious Keloid may arise from the most trivial wound, as of a leech-bite or pin-scratch, and it would be exceedingly difficult, in many cases of apparently true Keloid, to exclude the occurrence of an anterior traumatism of this character. In fact, it is within the bounds of probability that all Keloids are the result of traumatism or local irritation induced by pre-existing skin lesions, as sycosis, acne, syphilitic lesions, etc.

Course.—Keloid, once appearing, usually pursues a slow, indolent, and non-inflammatory course. It gradually increases in size, and additional patches may appear, so that three or four, or even a dozen or more distinct lesions are met with on the same patient. After a time some of them may come to a standstill while others develop into tumors of considerable size, causing much inconvenience to the patient.

Diagnosis.—As a rule the diagnosis of Keloid is easy. Its most frequent seat, when apparently spontaneous, is the region of the sternum. Its appearance is very characteristic, looking like a large elevated scar, and it can hardly be mistaken for any other cutaneous affection except a hypertrophied scar itself. From this latter it is to be distinguished by its history, course, and progress. The scar, having attained its maximum development, in a short time becomes stationary, while Keloid continues to increase for a much longer period of time, and fresh Keloids appear on the slightest provocation.

Prognosis.—The prognosis of Keloid is, as a rule, unfavorable. Instances of spontaneous involution and disappearance have been noticed, but these are few in number. A few cases also of Keloid, arising after other cutaneous affections, have been dissipated by treatment, but the great majority persist indefinitely and for life.

Etiology.—The etiology of Keloid is obscure; in fact, nothing definite is known on the subject.

Treatment.—It must be confessed that the treatment of Keloid is anything but promising. At first thought excision would seem to offer an appropriate measure of relief. Unfortunately, however, experience has shown that Keloid almost invariably returns after the use of the knife. Under these circumstances an operation of this sort would only be warranted in cases where the tumor had attained such a magnitude that by its mere size it interfered with the functions of the part on which it was seated, or produced other serious inconvenience to the patient. The operation should be regarded as merely a means of temporary relief.

In two cases of Keloid that had followed sycosis, and one case that followed small-pox, I have seen an almost complete disappearance of the tumors under treatment. In the first two cases absorption occurred under the use of the *Ungt. Potassii Iodidi*, continued, as the state of the parts would permit, for several months. The third case was under the care of my friend, DR. N. G. MCMASTER. He made incisions into the tumor about one-fourth of an inch in depth and one-twelfth of an inch apart. After the hemorrhage had ceased, the parts were dried, and pure acetic acid was brushed on several times, allowing an interval for drying between each application. Besides the use of a vaseline dressing and fomentation of the part in very hot water for five minutes at a time, night and morning, nothing more was done for a week, when it was noticed that the part operated on had diminished in all its measurements, especially in prominence. Three more operations, a week apart, so reduced the growth that its elevation above the skin was hardly appreciable.

WILSON (**77**, 332) says: "For my own part, I prefer, after regulating the general functions of the system, the maintenance of a steady course of Donovan's solution, in doses of ten drops, three times a day; or of the protioduret of mercury in combination with guaiacum and the oxy-sulphuret of antimony. The false Keloid I have succeeded in removing by means of three-grain doses of the iodide of potassium three times a day, and a Plummer's pill at bedtime.

"Locally, the best applications are, collodion, to produce mechanical pressure; liquor plumbi diacetatis, as a sedative, to be pencilled on the tumor; the preparations of iodine, either the tincture or the solution of iodide of ammonium, as recommended for scrofulo-derma, or an ointment of iodide of lead, in the proportion of two parts of lead to one of lard. The latter relieves immediately the prickling and uneasy sensation that often accompanies Kelis. Great comfort is frequently given by the galbanum and opium plaster, spread on wash-leather; or if there be no irritation, soap plaster or diachylon on wash-leather."

TILBURY FOX (**61**, 350) says: "I do not know of any better plan than the continuous application of contractile collodion to the tumors, to which the hypodermic solution of morphia may be likewise applied for the relief of pain."

SQUIRE (**81**, 84) recommends chloride of ammonium, cod-liver oil, or the alkaline iodides internally, and ointments of iodine, or of the various iodides externally. He adds that stimulating mercurial preparations are of service.

LEPROSY.

SYN.: Lepra; Lepra Arabum; Elephantiasis Græcorum.

Definition and description.—Leprosy is a constitutional affection characterized by marked and peculiar changes in the skin and other organs of the body. It presents three principal forms, known as the macular, tubercular, and anæsthetic. These are usually associated together in varying degree in each case, although one of them, as a rule, predominates over the others.

Before the disease becomes sufficiently advanced to present distinct and characteristic symptoms, there usually exists a prodromal stage, of greater or less, often of years, duration. During this period there may be nothing to particularly attract the attention to leprosy, and the only evidence of ill-health may be a feeling of languor or loss of force, with sometimes mental depression. Occasionally a brownish discoloration (*macule*), or an isolated bulla, may appear from time to time, the first usually healing before the second makes its appearance. Later, the macules become more numerous and larger, from the size of a coin to that of the hand, but it is difficult to appreciate with the fingers any thickening or infiltration. The patches at first are of a reddish brown, and as they increase peripherally their advancing border maintains this color, while the central portions gradually lose it, and fade into a dirty gray, and sometimes to a dead white. Occasionally the macules disappear entirely without leaving any mark. When the patches first appear they are commonly *hyperæsthetic*, but as the disease advances, this condition gradually disappears, and ultimately the white patch becomes *anæsthetic.*

In company with the macules, or independently, *tubercles* may arise. These are thickened elevations of the skin, sometimes quite circumscribed, at other times more diffuse. The tubercles at first may be hyperæsthetic, later becoming anæsthetic. They may appear on any part of the body, but very frequently make the face their favorite seat, locating themselves above the eyebrows, and on the nose, lips, and ears. When they are developed to any great extent, they render the features extremely repulsive and disgusting. The tubercles may persist throughout the whole course of the disease, or, on the other hand, undergo ulceration, or disappear by interstitial absorption. Coincidently with these changes, or later, the mucous membranes of the buccal cavity, nares, pharynx, etc., may present similar lesions.

The *anæsthetic* form of Leprosy may arise as a late stage in the course of a case that at the beginning had exhibited macular or tubercular features only, or it may appear without such tubercular development. The principal cutaneous lesions met with at the commencement of this form are *bullæ.* These vary in size, and persist for a short time only. Commonly they rupture, and leave a stained surface which in time becomes the seat of anæsthesia. Hyperæsthetic patches may appear from time to time, and persist for months or longer, and be ultimately succeeded by anæsthesia. The anæsthetic portions of skin may also undergo a certain degree of atrophy, which process may involve the subcutaneous tissues, and result in ulceration, and if situated upon the hands or feet, to caries of the bones of these parts. The distal phalanges are the first to suffer, later the others, so that in time all of the fingers and toes may drop off. In this form, especially, changes in the ulnar nerve, at and just above the elbow, can usually be appreciated with ease, the nerve becoming swollen and tender.

Course.—The course of Leprosy is chronic, five, ten, or fifteen years elapsing before the patient falls a victim to the disease, usually through the medium of some intercurrent affections.

Diagnosis.—In advanced cases, the diagnosis presents no difficulty, as the features of the disease are exceedingly characteristic. I can imagine, however, that it might be mistaken for syphilis, by those who are in the habit of calling every severe case of skin disease, that they do not know the name of, Syphilis. In the earlier stages, before the cutaneous lesions appear, great difficulty might be experienced, especially in countries where the disease is not of frequent occurrence. Even here, however, it is possible that early changes about the ulnar nerve might give a clue to the nature of the disease, which inquiry into the patient's history, former places of residence, etc., might confirm. The macular form might be mistaken for vitiligo, but a careful comparison of the two diseases need not leave the inquirer long in doubt.

Prognosis.—The prognosis of Leprosy is, without question, very unfavorable. So far as it is possible to get at the facts, a few cases of Leprosy appear to have been cured, a larger proportion have been benefited, but in a still larger portion, the progress of the disease has not been stayed.

Etiology.—Further than the fact that Leprosy is frequent in some parts of the world,* and rare in others, we know very little regarding the immediate causes that tend to produce the disease. Hygienic and climatic influences have been supposed to be potent in the production of the disease, but it has been found that these influences are not identical in character in the different localities where this disease is most prevalent, as the disease appears to flourish as freely in Norway and Iceland, as in tropical and equatorial latitudes. Hereditary influence is an important and acknowledged factor, though many cases are met with which cannot be attributed to this influence. The question, however, as to the transmissibility of Leprosy from one person to another, is of vital importance.† In other words, is the disease contagious or infectious in any degree or manner. In the opinion of the majority of East Indian medical officers,‡ the disease is not contagious. As further negative evidence it may be stated that for several years (from 1864 to 1869), there was a leper patient in the Bellevue Hospital. During a portion of this period another leper acted as nurse in one of the wards. These lepers were of course in contact with many hundreds of persons, and yet from that to the present time, there has not been a single case of leprosy observed in this city in persons who were, during the years mentioned, residents of the city. *Per contra*, we know that when Leprosy has once gained a decided foothold in any locality, it is apt to spread with great rapidity thereafter. A recent writer,§ moreover, takes very strong ground, and brings much evidence in support of the view that the disease is, in some way, transmissible. A careful review of the evidence presented on both sides, leads me to the conclusion that probably Leprosy, like Syphilis, is not transmissible by ordinary contact and association, but if the blood or secretions of a leper gain access to the system of a healthy person, the latter may, in this way, contract the disease.

Treatment.—Before entering into the questions relating to the direct treatment of individual cases, it is important to consider the management of the disease, *en masse*, that is to say, the general prophylaxis. The principles that underlie this are sufficiently well understood, and there is an almost absolute unanimity of opinion as to the proper course to be pursued. If a given community is to be protected from the spread of leprosy, all cases that exist in it at the time should be absolutely separated from the rest of the inhabitants. Each new case, as it appears, should be sent to join the company of unfortunates. This is a matter that could only be properly managed by efficient and strict regulations on the part of the General Government. There are, at the present time, in the United States, probably over fifty lepers, and it is time that suitable measures were taken to prevent their further increase. A central lazaretto and appropriate national legislation will secure this end. The experience of other countries, notably the Sandwich Islands, should warn us not to defer the consideration of this subject too long.

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* In North America it exists among the Chinese in California, among the negroes in Louisiana, among the Norwegian immigrants in the West, at the village of Tracadie in New Brunswick, and in Mexico. I have personally examined a dozen or more cases in the city of New York, one of which had always resided in the State.

† Especially to such countries as may be threatened with an extensive Mongolian immigration, as the disease is quite prevalent among the Chinese.

‡ Report on Leprosy by the Royal College of Physicians. London, 1837.

§ ETIENNE BROSSE: La lèpre est contagieuse. Par un Missionnaire attaché aux léproseries. Paris, 1879.

In the management of individual cases, general hygiene claims the first attention. Good air, good food, suitable clothing, and frequent ablution have, wherever they have been availed of, contributed very materially to the amelioration of the disease, and the comfort of the unhappy sufferers. As regards the curative treatment we are unfortunately unable to speak with any great degree of encouragement. In all probability some cases of Leprosy have gotten well under treatment. The evidence on this point is too strong to be thrown lightly aside. In many cases, moreover, the disease has undoubtedly been greatly ameliorated and its progress retarded. It is not right, therefore, to pronounce every case of Leprosy necessarily hopeless, as has too often been done.

A number of drugs have been credited with being capable of rendering more or less service in the treatment of this disease. Some of these appear to have fallen into disuse, while others are of too recent introduction to enable us as yet to form a just opinion of their true value.

The principal indications for treatment are first to relieve the pains incident to the disease; to restore the sensibility to the anæsthetic parts; to heal the ulcerations, if any exist, and to cause the tubercles to disappear. Second, to retard the progress of the disease, and, if possible, prevent its further development. To fulfil these indications, a number of drugs and a number of "methods of treatment" have been employed. I shall mention some of them.

Calotropis gigantea, a now comparatively unknown drug, enjoyed a certain reputation in India fifty years ago, in the treatment of this disease. The statements of its advocates will be found on page 36 of this book.

Hydrocotyle Asiatica was introduced by DR. BOILEAU, himself a leper, who claimed to have cured not only himself, but also many others of the disease. (See page 68.) My own experience with this drug (though not in Leprosy) has satisfied me that it is an active article, and I think further experiments should be made with it by those who have the requisite opportunities.

Anacardium and *Hydrarg. Chlor. Corros.*—The use of these drugs constitute the special features of DR. BEAUPERTHUY'S treatment, and the method of their application, with other details of treatment, have been published by BAKEWELL (**146**, 1, '70, 550), to whom they were communicated for the purpose by DR. BEAUPERTHUY. DR. BAKEWELL writes as follows:

"*First.*—A nourishing and abundant diet; salt-fish or meat, and pork are prohibited entirely, so are spirits; light wine (Bordeaux) is allowed in moderation to those accustomed to it. Fresh meat should be given every day.

"*Second.*—The patients should live in as healthy a locality as possible, and not in the neighborhood of marshes, etc. They are required to sleep under mosquito nets, so as to prevent the stings of insects, which irritate and inflame the skin, and perhaps propagate the disease; not more than two persons are to occupy the same room; and it is better if each has a separate room.

"*Third.*—Internal remedies, varying according to the condition of the patient, are given. The principal one is bichloride in doses of $\frac{1}{15}$ grain twice a day. Quinine is given where fever occurs, and other remedies as occasion may require.

"*Fourth.*—To remove the tubercles and promote exudation, the oil of Cashew nut,* obtained by spontaneous evaporation of a tincture of the nut, which must be well pounded in a stone or wooden mortar before being exposed to the action of the alcohol. This is a most valuable application, acting slowly but very powerfully.

"*Fifth.*—A strong solution of nitrate of silver and copper, made by dissolving silver coin in strong nitric acid, mixing the nitrate thus obtained with an equal bulk of distilled water. This application is sometimes used instead of the cashew on anæsthetic patches.

"*Sixth.*—Frictions night and morning over the whole of the body with cocoa-nut oil.

"*Seventh.*—A bath of soap and water taken before the frictions. Sometimes baths of hot cocoa-nut oil 100° F., are beneficial."

Balsamum Gurgunicum.—DR. DOUGALL's treatment of Leprosy, with this agent, consists in the use, *internally*, of a mixture of one part of the balsam and three parts of lime-water, and, *externally*, a mixture of equal parts of balsam and lime-water. The details of the treatment are as follows: The patients rose at half past five, and taking a quantity of dry earth with them repaired to the banks of a neighboring stream. Here they bathed, rubbing themselves freely with the earth as they would with soap. At seven o'clock they returned to their barracks and received a half-ounce dose of the balsam mixture, and in addition a quantity of the *external* mixture, with which they thoroughly rubbed their bodies during the space of two hours. At nine o'clock they breakfasted, and after that were employed at different kinds of labor.

At three o'clock in the afternoon they again took half-ounce doses of the mixture, and rubbed themselves for two hours with the external application. Great benefit is said to have been derived from this treatment in spite of the meagre food supplied to the patients, their diet consisting chiefly of rice, a few vegetables, a little fish and curdled milk.

Oleum Gynocardiæ (Chaulmoogra oil).—This drug has long been in use by the Fakirs of India, and was first introduced to the profession by DR. MONAT, of the Bengal Medical Service, in 1854, since which time a number of favorable accounts of its use have appeared in the medical press. It is administered internally, in doses of from five to thirty grains, and externally in the form of ointment. Native Indian practitioners direct their patients, while taking the chaulmoogra to avoid all salt meats, acids, spices, and sweetmeats, but to aid its operation with butter and oily articles of food. DR. HOBSON occasionally gave saline aperients in connection with the oil.

In a case of Leprosy, at the Charity Hospital, under the care of DR.

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* "Cardol vesicans" of commerce, the product of the *Anacardium Occidentale*. See p. 17.

Sturgis and myself, very decided benefit has followed the use of chaulmoogra (**143**, July 10, '80, 46).

Nux Vomica.—I am not in possession of any facts concerning the use of this drug in Leprosy, other than the one mentioned on page 77. The drug, however, is of special interest in connection with the next, the active principle of which also appears to be strychnia.

Hoàng-Nàn.—This drug reaches commerce, or at least reached me in the form of a brownish woody powder, with an intensely bitter taste like that of nux vomica. Physiological experiments have shown that it is a tetanizing drug, and botanical authority refers it to the Strychnos family. A number of writers testify to its utility in Leprosy. The drug is given alone, or in one of the following combinations:

Alum	1 part.
Native Realgar	2 parts.
Hoàng-Nàn	2 parts.

or,

Alum	1 part.
Realgar	1 part.
Hoàng-Nàn	2 parts.

These mixtures are made into three-grain pills, of which the commencing dose is one pill daily, to be gradually increased.

Argenti nitras.—This is said, by **Dr. Hillebrand**, of Honolulu, to act as a tonic and alterative, and to control the disease for a limited period (**197**, 732).

Wilson discusses (**78**, 245) the treatment of Leprosy in the following terms:[*] "In the treatment of leprosy, the first and most natural suggestion is that of changing completely the hygienic surroundings of the patient. Change to a better climate, a more genial or more bracing air; sufficient exercise; exhilarating occupation and associations, bathing and cleanliness, and good and nutritious and sufficient food. From the earliest periods of medicine, these recommendations have been proclaimed, and we find wine and serpent broth,[†] probably a kind of turtle-soup, occupying a place at the very head of ancient remedies. . . . The most perfect diet that could be obtained is the mixed meat and vegetable diet of England, with a proportionate supply of our excellent beer.[‡] . . . .

"Danielssen and Boeck, regarding elephantiasis as a dyscrasia of the blood, leading on to a general cachexia, employed as their remedies, in addition to generous diet and cod-liver oil, small bleedings from the skin, by the aid of cupping, and internally sulphate of magnesia, arsenic, tincture of cantharides, iodide, and for neuralgic pains the iodide and bromide of potassium.

"Locally, in pursuance of the theory of imitating nature's processes, and finding that the tubercles tended to softening and absorption, they painted the larger prominences with the acid nitrate of mercury; and the smaller ones with a solution of potassa fusa and water, one part to two; while for effecting a similar purpose on the rest of the skin, they employed baths of caustic potash and sulphuret of potash. They ventured even to apply caustic potash to tubercles situated within the larynx, which threatened to suffocate the patient, mixing the caustic with honey. The application was always attended with a violent fit of coughing, but was always succeeded by benefit.

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[*] I omit references to methods of treatment already discussed.—H. G. P.

[†] Old Galen (Kühn's Ed., Vol. 12, p. 312 *et seq.*) reports several cases of recovery from leprosy by the use of wine, in which vipers had been drowned. Curiously, the homœopathists of to-day recommend the use of "Lachesis," a drug prepared from the poison of the lance-headed viper of South America, in this disease.—H. G. P.

[‡] It is a pity that American beer cannot receive this commendation. Composed largely of artificial glucose, I believe it is the reverse of wholesome.—H. G. P.

"In the anæsthetic form of the affection they aimed at neutralizing or arresting morbid action in the nerves and spinal cord, by cupping and counter-irritation, while pursuing the constitutional treatment already indicated. Thus they cupped repeatedly in the region of the spine; they used the moxa, they established issues, and excited a more general irritation of the skin by tartarized antimony; . . . . .

"Under the belief that the tissues principally attacked in elephantiasis were the gelatinous and not the albuminous, and that the agent of the disease was a specific zymotic virus, Newton prescribed acetic acid and carbolic acid in combination with alcohol; meeting other indications with quinine to improve digestion; nitro-hydrochloric acid to stimulate the liver; cod-liver oil as a nutritive agent, and a cholagogue cathartic of podophyllin, aloes, and ipecacuanha to obviate constipation. He likewise recommends a tincture of the young roots of the plumbago rosea, the *lal chitra* of the native language, in drachm doses three times a day, for anæsthesia." . . . . .

After speaking of Beauperthuy's treatment Wilson goes on to say:

"In addition to the remedies made use of by Beauperthuy, I have myself painted the aphthæ and ulcerated surfaces within the fauces and mouth with sulphurous acid. I have also given sulphurous acid combined with liquor cinchonæ internally, and have found a mixture of acetic acid and carbolic acid with quinine and brandy, . . . of considerable service as an internal remedy.

"The oleum anacardii, or cashew-nut oil, acts upon the morbid skin in a manner somewhat similar to the caustic potash employed by Danielssen and Boeck; it produces a copious exudation from the surface to which it is applied; it robs the morbid skin of the excess of fluid with which its tissue is infiltrated, and in this manner reduces the bulk of the tubercles, the swelling of the nervous knots, and the œdema of the distended integument. It is, therefore, especially adapted to tubercles wherever they occur; and one or two applications will sometimes render a surface nodulated all over perfectly smooth, and at the same time remove the more deep-seated hardened knots that are felt in the morbid integument.

"The oil is applied with a camel's-hair brush, and a certain region is selected for the purpose; it may be a part or the whole of the face, or more or less of a limb, or any other portion of the body where tubercles, thickening, and induration of the skin are present. There is no pain at the first application of the oil; but after a few hours there may be more or less pain, in proportion to the degree of sensibility left in the skin; for the same reason, while at first the applications are perfectly painless, they become painful subsequently in consequence of the restoration of the functions of the cutaneous nerves. In this sense the remedy constitutes the test of the existing sensibility of the skin. On the day following the application of the oil, the surface to which it was applied is coated over with a moderately thick crust of exudation-matter, partly of a glairy, viscous nature, like the product of the deep ulcers already spoken of, and partly semipurulent. While at the end of a week, when the crust has usually peeled off, the surface below is smooth and soft to the touch; and very frequently the pigmentary discoloration, which previously existed, is removed.

"When the crust has exfoliated from the part first treated, the oil may be applied to a second part, and so on in succession until every portion of the morbid skin has undergone the process; and should the tubercles reappear, the application may be made to the affected skin until the tubercles cease to be formed, and until the integument has regained its natural texture and sensation.

"It has seemed to me that the exudative process set up by the oleum anacardii is not merely local in its operation, but that it performs the office of general derivative or general emunctory to the whole organism; that in fact, it represents the copious and continuous discharges which I have already spoken of as flowing from deep-seated ulcers, and which, while they last exert so favorable an influence on the general comfort and health of the patient."

After this very thorough exposition of the treatment of Leprosy by those who have had ample opportunities of observing the facts, it is hardly to be expected that the writer can add much of value from his own limited experience with the disease. I have, during the past fifteen years, had a number of cases of Leprosy under my charge, usually, however, for a short time only, as the patients manifested a disposition to change from one physician to another. As the result of personal treatment I can briefly state, that I have found the pains of Lepra controlled by blisters along the course of the affected nerves, that I have seen the tubercles disappear under applications of both *Ungt. Potassii Iodidi*, and of Chaulmúgra, and that apparent benefit was derived from the internal use of Chloride of Barium in doses of $\frac{1}{10}$ of a grain to $\frac{1}{2}$ grain daily, and that very decided benefit accrued from the internal use of Chaulmúgra.

Although the treatment of Leprosy now presents a far more favorable aspect than formerly, I am by no means satisfied that we have reached the limit in this direction, and with a view to possible further improvements I venture to offer a few theoretical considerations looking to a more rational treatment of the disease. Thus far treatment has been purely empirical, but a study of the disease itself, taken in connection with the results of treatment thus far obtained, appears to me to give a clue to a method that may prove still more serviceable.

The disease having been once acquired, a long period, sometimes several years, intervenes before any distinct or pathognomonic symptoms present themselves. When they do come they are usually referable to both the skin and the nervous system. In other words, there is evidence of lesion of both organs. The special point of interest, however, is to determine in which system the lesions first show themselves.

In other words, do the cutaneous lesions appear first, to be followed by lesions of the nerves and spinal cord, or is the cord first affected followed by degeneration of the nerves, and ultimately of the skin? The study of cases and the results of the *post-mortem* examination of a case that died under my care last year, together with other circumstances, lead me to the opinion that the disease first attacks the spinal axis, and then involves the nerves, and later implicates the skin. The earlier changes in the nerves would appear to be of a subacute inflammatory, or rather proliferative character succeeded by a sclerotic degeneration and atrophy. If this theory of the disease is correct, it naturally follows that, before commencing treatment, we should carefully consider the stage and condition the disease is in. In the early periods, where we have reason to believe that hyperemia and irritation of the cord exists, our treatment should be specially directed to their relief. To this end counter-irritation, minute doses of strychnia, or full doses of ergot or bromide of potassium, would seem appropriate. Later, I think that mercury, iodide of potassium, and chloride of barium would come in play, and still later, when sclerotic degeneration is commencing, strychnia, phosphorus, phosphoric acid, etc., in full doses, and galvanization. This, together with suitable local treatment, would seem to me far more rational than to follow what appears to have been the usual plan, namely, to select one or two drugs and make them the mainstay of treatment, irrespective of the stage or grade of the malady. All of the drugs just mentioned appear to have been useful in some cases of Leprosy, and it only remains to be seen whether they cannot be made still more so, by adapting them to the special indications that they are capable of filling, rather than to attempt to treat all phases of the disease by one routine method. Until we discover a specific for leprosy as we have for syphilis, let us use the same discrimination and care that we would in the management of any other chronic disease.

Since the foregoing was written, the following from the pen of DR. LABONTÉ of Mauritius has appeared (**126**, Nov., '80). It will be seen that he speaks far more hopefully of the therapeutics of the disease, than with my own limited experience I had felt justified in doing. He writes as follows:

"Is leprosy, tubercular or atrophic, amenable to medical treatment? . . . . . I am perfectly satisfied that ere long a cure may yet be found, and that at this present moment we have the means of checking effectually the disease in its progress, and of relieving the sufferings of the patient. Leprosy, tubercular or atrophic, being a dyscrasia, and its poison being specific, I have invariably at the outset of the disease, as well as in its advanced stage, combined alterative medicines with what are commonly called specifics—amongst others, Chaulmúgra oil, the fluid extracts of the Hydrocotyle asiatica, the Siegesbeckia orientalis, Cassia occidentalis, C. rosea Linn.

"I am in the habit of putting the patient at once on 10 ♏ of the oil daily, increasing the dose to a maximum of ʒj. and ʒij. in very bad cases, provided the stomach be not upset thereby. It is best given at bedtime in some warm bitter infusion; and in case of nausea, Vichy lozenges answer well. The maximum dose is to be lessened gradually as soon as there is a decided improvement in the patient's condition. At the same time, patient is to drink as much decoction of the Hydrocot. asiat. as he likes, with the addition of ℥j. of the above compound fluid extract to a bottle of decoction. His diet is to be nutritious but non-stimulating; he is to take what exercise he can in the open air, but in the shade, to get a medicated bath daily (alkaline or sulphurous as the case may be), cold or warm, according to his extreme sensibility to cold or heat. If there be large tubercles, they are to be cauterized with the acid nitrate of mercury; if not large, they are to be rubbed briskly twice daily with an ointment containing from 30 ♏ to 50 ♏ of the acid to an ounce of cold cream. If there be only blotches or insensibility, the affected parts are to be rubbed briskly with a lotion varying from ʒj. to ʒiij. of the acid to a bottle of water. In combination with those medicines, patient is to get 3 ♏ of the liq. arsenicalis after meals. The effects of which treatment are, of course, to be watched narrowly.

"*Complications.*—Their treatment has not been invariably one and the same, except as regards iritis. Here a seton at the nape has been in general use when the disease has run in the subacute stage, to be kept open for months to prevent a recurrence of the disease; small doses of the iodide of potássium and of the bi-iodide of mercury in the compound extract of the Hydrocot. asiat. being given at the same time, as well as Chaulmúgra oil. In the acute stage the ordinary treatment of iritis has been followed. I must mention a very frequent complication in the eye in cases of some standing, whereby vision is impaired by the deposit of tubercular matter in the anterior chamber, where it settles in the form of a crescent, occupying most generally the upper margin of the cornea. This deposit may go on increasing gradually and steadily until vision is lost, unless it be checked in time by washes with the strong decoction of the Hydrocot. asiat. and the bicarbonate of soda, the same salt or the iodide of potassium being at the same time administered inwardly, and the general plan of treatment continued.

"Ulcerations in the nostrils are best treated locally by frequently washing out the nose with a lotion of the Hydrocot. as. and carbonate of soda, and by the direct application of the ointment of the hydrocot. as., pure or in combination with the white precip. ointment. Another excellent topical application is the ointment of the white precipitate suspended in equal parts of glycerine and sweet-oil. In obstinate cases a wash of sulphate of copper answers well. Under such local treatment it is seldom that ulcerations do not heal up quickly, tubercles disappear, and the passage of air through the nostrils rendered more easy and free. At the same time that this takes place either in the nostrils or on the septum of the nose, the organ assumes a more normal appearance, the voice becomes clearer, the patient can breathe with his mouth closed, and snoring at night disappears.

"Ulcerations or tubercles in the buccal cavity, on the tonsils, palate, uvula, or pharynx, are best treated locally by the direct application of the acid nitrate of mercury in doses varying from 5♏ and 30♏ in a sufficient quantity of glycerine. Under the combined influence of this local treatment and the constitutional treatment there supervenes a rapid improvement in the condition of the parts. Ulcerations on the hands and feet and on the extremities generally get well under the influence of the alkaline baths mentioned before, and by proper and constant dressing with the same wash. Cold-water dressing has in many cases been tried and preferred by many patients; some have been benefited by the Hydrocot. as. ointment, some by the red precipitate ointment, by the tincture of aloes, by the sulphate of copper ointment, etc. Do what we may, however, of all the ulcers most difficult to heal, those which are situate at the sole of the foot are by far the worst, and they will for a time continue open, whatever care and attention the patient may devote to them; they may or may not be attended with pain, and may or may not interfere with walking.

"Another complication in the calves, with exacerbation of suffering and pain at night, is the constant burning sensation felt by the patient in many cases of some standing. This severe symptom is best treated by the exhibition of the iodide of potassium in grain doses every hour, combined with laudanum, until the symptoms abate. Morphia, chloroform, and cold applications have given relief too. Perhaps subcutaneous injections of morphia might answer well. This is a complication to be met with more in the atrophic or the mixed form of leprosy rather than in tubercular leprosy. Mortification of the soft parts, principally in the legs, in old cases of tubercular leprosy, where the mortification extended from the knee to the foot, threatening amputation at the ankle, has been stopped and cured by the administration of general tonics, bark and phenic acid, by poulticing with the S. orientalis, sprinkled over with phenic acid, and by dressing with carbolic-acid lotion when the sphacelus had come off.

"The atrophic form, just as the tubercular, springing from the same dyscrasia, the plan of general treatment I pursue is very much the same, save that in the atrophic form neurine tonics come in for a large share. Chaulmúgra oil, the compound extract of Hydrocot. as., are exhibited, medicated baths prescribed, the spine is rubbed with stimulating liniments, wherein ammonia, cantharides, turpentine, and other rubefiants enter. Phosphorated oil is given in small doses preferably to strychnia or the ergot of rye. Electricity is employed with a view of stopping the atrophy in its onward march, and of restoring tone to what muscles may yet remain.

"Such is a summary of the means I have been using for the last ten years, with marked benefit to many who have applied to me for relief; and I am glad to say that up to this very moment those means have not failed. The treatment just as I have laid it down is not to be followed uninterruptedly. When I have to deal with patients who are in earnest, and willing to live in the enjoyment of comparatively good health, all active treatment is now and again suspended. Mineral waters, alkaline or sulphur, as the case may be, are prescribed, cold shower-baths, the arseniate of iron, cod-liver oil, and other alterative and tonic medicines. Many a patient, especially of the higher class of society, continues well in this way. Not so when we have to do with a class of patients who will be steady only the time they cannot help doing otherwise; with them the immunity from the disease will be of comparatively short duration, relapses will be frequent, and with each relapse there will come some new complication, until the disease, getting the better of them, will run a rapid course to terminate in death."

The following drugs may also be considered: *Arsenic*, 25; *Aurum*, 29; *Cantharis*, 39; *Fumaria*, 55; *Iodine*, 70; *Psoralea*, 96; and *Sulphuris Iodidum*, 109.

LICHEN ÆSTIVUS.

SYN.: Lichen tropicus; Prickly heat.

LICHEN ÆSTIVUS is an affection depending on an elevated temperature, and is naturally more frequent in tropical regions than elsewhere. In temperate climates, however, it prevails to a considerable extent during the summer months. The following classic description by DR. WINTERBOTTOM is taken from WILLAN's work **(96, 57)**: "The Prickly Heat appears without any preceding disorder of the constitution. It consists of numerous papulæ, about the size of a small pin's head, and elevated so as to produce a considerable roughness of the skin. The papulæ are of a vivid red color, and often exhibit an irregular form, two or three of them being in many places united together; but no redness or inflammation extends to the skin in the interstices of the papulæ.

"The eruption is diffused over those parts of the body which are usually covered, as the neck, breast, arms, legs, and inside of the thighs. It does not appear on the face, excepting on the upper part of the forehead contiguous to the hair; neither is it ever found in the palms of the hands, soles of the feet, nor on the hairy scalp. The number of the papulæ is much increased by wearing flannel, or clothes too warm and thick for the climate. When perspiration is very copious, small pearly pustules, containing a limpid humor, are often intermixed with the Prickly Heat, more especially on the breast, and about the wrists; but they terminate in scales, having no disposition to ulcerate, though scratched.

"A troublesome itching attends the Prickly Heat and prevents sleep during the night. There is likewise a frequent sensation of pricking, as if a number of pins were piercing the skin. This often takes place suddenly, after drinking a dish of tea or any warm liquor, so as to cause the person affected to start from his seat.

"The eruption is in general stationary, and appears equally vivid in the day and in the night. It does not leave one part and arise on another unless the former be much exposed to cold, and the latter be heated by additional clothing, or by friction. An increase of heat indeed, in all cases, produces a greater number of papulæ. They sometimes disappear on a sudden, and return again as suddenly, without any obvious cause; but whenever the eruption continues for a length of time, the papulæ throw off minute scales, and are succeeded by a fresh crop, no vestiges being left in the skin.

"Persons of a fair complexion, with red hair and a soft skin, are most liable to this eruption and have the greatest quantity of it. Those who are of a dark complexion, either remain wholly free from the eruption, or are affected with it very slightly."

Diagnosis.—The character of the eruption, taken together with the season of the year in which it occurs, obviate all difficulties in diagnosis, as there is no other eruption, except the *strophulus* of infants, that at all resembles it.

Ætiology.—A heated atmosphere is undoubtedly the exciting cause of the eruption, and this, taken in connection with too profuse perspiration, a full habit and a lack of cleanliness. constitute the main etiological factors.

Treatment.—The treatment of Lichen Æstivus is very simple, and considerable relief can be afforded by attention to ordinary hygienic requirements. As a rule little, if anything, is required in the way of internal medication, and even if it were there is very little in the way of internal medication known to the writer that can be credited with being of much service. Both acid and alkaline drinks, fruit juices on the one hand, and carbonated alkaline waters on the other, exert perhaps a slight beneficial influence. External agencies are more important. The avoidance of unnecessary exposure to heat is to be first considered, next thorough cleanliness and the removal, by daily or twice daily baths, of the effete matters left upon the skin by the evaporation of the perspiration. Cold baths afford temporary relief, but the reaction is often followed by increased irritation. On the other hand we have found baths as hot as could be borne afford more lasting comfort. Turkish baths have proved specially useful. A mild alkaline application, made by adding half a pound or more of ordinary sal. soda to a full bath (thirty gallons) is sometimes very soothing. When the eruption is not very extensive, sedative ointments or lotions of stramonium, cherry-laurel, or chloral may be employed. In this connection my friend DR. BRONSON (201) has found lemon-juice an agreeable and useful application. In the severest cases bromide of potassium or small doses of opium may be required at night.

LICHEN PLANUS.

Definition and description.—The first clear and distinct description of this affection was given by Wilson (**135**, 3: 117) in the following language:

"Lichen planus is an eruption of pimples remarkable for their color, their figure, their structure, their habits of isolated and aggregated development, their habitat, their local and chronic character, and for the melasmic stains which they leave behind them when they disappear.

"The *color* of the pimples is a dull crimson-red, more or less vivid, and suffused with a purplish or lilac tinge.

"In *figure* the papulæ are flattened, smooth, and depressed on the summit, angular in outline, only slightly elevated, and of a size varying between one and three lines in diameter; . . . . the flatness is rendered more conspicuous by the summit of the papule being occupied by a thin, horny, semi-transparent lamina of cuticle, depressed on the surface, and marked in the centre by the aperture of a follicle which represents a sort of *hilum*. . . . .

"In *structure* the papule of Lichen planus is a hyperæmia with exudation, surrounding a follicle, and covered by a thin layer of horny, transparent cuticle; while the aperture of the follicle and its conical epidermic plug are visible in the centre of the horny plate. The horny covering is in nowise a scale; it rises and falls with the papule, and neither separates nor exfoliates. . . . .

"Lichen planus presents two principal forms of manifestation, *discrete* and *aggregate*. . . . .

"The *habitat* of the eruption is also characteristic of the identity of Lichen planus; it is pretty constantly met with on the front of the forearm, just above the wrist; in the hollow of the loins; on the lower half of the abdomen; on the hips; around the knees; particularly over the mass of the vastus internus muscle; on the forearms and calves of the legs, and in women, around the waist, and in the grooves occasioned by the garters. We have seen it also, but less frequently, on the palms of the hands and soles of the feet; and in two instances on the tongue, the buccal membrane, and the mucous lining of the fauces.

"Lichen planus is essentially *chronic* and *local* in its habits. . . . . In distribution it is generally symmetrical, but occasionally is limited to one side of the body; sometimes occurring on one side in the upper extremity, and on the other in the lower. It has no constitutional symptoms of its own, and frequently prevails with very little disturbance of any kind." The affection is sometimes attended with slight, rarely with severe itching, and occurs most frequently during the middle periods of life.

Diagnosis.—The only affection with which Lichen planus is likely to be confounded is a papular syphilide. The resemblance, on a cursory examination, is often so striking, that a careful study of the peculiar lesions above mentioned will be rendered necessary. The pruritus which is usually present in Lichen planus serves also to distinguish it from a syphilide. The previous history must also be taken into account.

Prognosis.—The prognosis of Lichen planus is good, the majority of cases recovering under a few months' treatment.

Etiology.—Little, if anything, is known on the subject.

Treatment.—Wilson, who has probably had a larger experience with the disease than any other dermatologist, says: "Our first object should be to regulate the functions of the economy whenever any disorder may be apparent; in the next place we should endeavor to restore the vigor of the system by tonic remedies, such as bitters, quinine, nitro-muriatic acid, and chalybeates; and these objects being effected we may finally have recourse to the tonic—nutritive operation of arsenic." Locally, he recommends a lotion of the bichloride of mercury, two grains to the ounce of bitter almond emulsion.

T. Fox (**61**, 150) considers that there are four general indications for treatment: "The *first* is to improve the tone of the patient as regards his nervous system by proper rest and quiet, by change of air and scene, and the avoidance of fatigue, if necessary. The cure is not solely a matter of mere dosing the patient. The general tonics appropriate to the disease are quinine, cod-liver oil, the mineral acids, and perchloride of iron.

"The *second* indication is to alleviate internal troubles—of stomach especially—and it is necessary to do this before beginning a tonic treatment. . . . .

"The *third* indication is to feed up the patient whenever there is evidence that his or her living has been bad or defective ; but in order to do this it is necessary that such conditions as dyspepsia, pyrosis, or the like, be first of all removed.

"The *fourth* indication is to attempt to diminish the hyperæmia by astringents given internally, *e.g.*, the perchloride of iron. But this cannot be undertaken till special influences that intensify the irritation of the skin, dyspepsia, etc., are properly negatived. I like the perchloride of iron in full doses in cases of lichen planus. With regard to arsenic I can only say that it has always made my cases worse. In some instances of lichen planus in the discrete form, where the papules have been particularly solid and there has been less hyperæmia than usual, and the patient was fairly strong, I have given alterative doses of mercurials with very great benefit indeed, in conjunction with cod-liver oil." Fox also uses internally, as anti-pruritics, aconite, chloral, carbolic acid and opiates; and externally alkaline baths, oxide of zinc, subnitrate of bismuth, oil of cade, etc.

Taylor (**110**, Oct., '74) reports good results from the use of oxidizing agents and alkaline diuretics.

In my own experience, which has been limited to the treatment of some six or seven cases only, the principles of treatment laid down by Wilson, have been followed with satisfactory results.

LICHEN RUBER.

Definition and description.—This affection was first differentiated by Hebra. The following is an abridgment of his description :

The affection consists in an eruption of papules, which always remain such, never changing into vesicles or pustules, and never undergoing any modification except when the eruption of new papules changes a discrete into a confluent lesion. The papules always present an intense red color except when covered with scales. In the beginning the papules are miliary, and each covered with a fine scale. They never increase in size, but preserve their original volume throughout the whole course of the disease. Fresh papules may arise between the original ones, or at a distance from them. When the papules are in contact, they form continuous patches of variable size and contour, red, infiltrated and covered with scales. The entire surface may be invaded in this manner. In advanced cases the pruritus may be intense. The condition of the general health varies with the extent of the eruption. At the beginning it may not be appreciably affected, but as the disease advances the organic functions deteriorate and nutrition suffers. The appetite or sleep may not be much disturbed, but the subcutaneous fat gradually diminishes, until, finally, the patient falls into a state of marasmus and at last dies. The disease is more rarely met with in England and this country than in Germany.

Diagnosis.—The diagnosis of Lichen ruber is sometimes attended with difficulty, especially to one not very familiar with cutaneous diseases. In the early stages there is a certain resemblance to the papular syphilide, and in the later to an ordinary diffuse psoriasis. The practised eye will detect the differences, but the less experienced must be guided by the history of the case, and the effect of treatment, which in Lichen ruber will probably be *nil*, while in the other affections it ought to be promptly successful.

Prognosis.—The prognosis is decidedly bad, thirteen out of the first fourteen cases seen by **Hebra** having terminated fatally. Occasional success, however, may be expected, and consequently the patient should not be permitted to give himself up to despair.

Etiology.—The causes of this disease are entirely unknown. The view, held by some, that Lichen planus and Lichen ruber are but stages of a single disease, I believe, for reasons given elsewhere (87, 333), is untenable.

Treatment.—**Hebra** recommends large doses of Arsenic continued as long as the patient survives, or possibly gets well. **Sherwell** (210), however, has obtained decided benefit from the internal use of Linseed, and this latter treatment appears to be the most successful yet proposed.

LICHEN SCROFULOSORUM.

Definition and description.—This affection, first clearly described by **Hebra**, consists in an eruption of miliary papules of a pale yellow or reddish brown color, though sometimes the normal hue is preserved. The papules are disposed in groups, sometimes forming circles or segments of circles, beyond which pigmentary macules, marking the site of earlier papules, may occasionally be seen. The little elevations are always covered with fine scales. Pruritus is insignificant. The papules promptly attain their maximum development, but then persist unaltered for a long time. At last they gradually undergo resolution after having existed for months or even years. Sometimes tubercles, resembling those of acne, and which may go on to suppuration, develop in the neighborhood of the papules. The horny layer of the epidermis between the groups of papules exfoliates in fine scales. Each papule is situated at the orifice of a hair-follicle and forms an elevation consisting of a mass of horny cells. These cells contain a larger amount of entangled fatty matters than usual. After removal of the semiglobular epidermic mass, which constitutes the papule, the open mouth of the piliferous follicle may be perceived with the naked eye. The eruption may occur upon any part of the body, and be more or less generalized. In about ninety per cent. of the cases met with by **Hebra**, other scrofulous lesions, as enlarged lymphatic glands, periostites, caries, etc., were encountered.

Diagnosis.—This disease, I should judge, is exceedingly rare in this country, as I have met with but two well-marked cases. In these, however, the affection was readily diagnosticated in consequence of the typical character of the lesions, recalling, in the most exact manner, the description given above. I know of no other affections with which it might be confounded.

Prognosis.—The prognosis is good. All of the cases treated by **Hebra** recovered, as did the two under my own observation.

Etiology.—Except that the eruption appears to be developed under the influence of the scrofulous diathesis, little can be said concerning its etiology.

Treatment.—**Hebra** recommends the use of cod-liver oil, both internally and externally. He commences with an ounce, morning and night, on an empty stomach. Locally, he applies the oil with a liberal hand, so as to keep the affected parts constantly saturated with it. At the commencement of treatment four frictions a day should be employed, and the parts covered with flannel; later, two in the twenty-four hours will be sufficient. He found warm baths and vapor baths prejudicial. The diet should be nutritious and highly nitrogenous, and proper hygienic conditions should be enforced. I have nothing to add to this except the addition of other antistrumics, as iodide of iron, etc.

LUPUS.

Syn.: Scrofulide.

Definition and description.—Lupus is a chronic, non-contagious, destructive disease of the skin, characterized by extreme obstinacy and liability to relapse. Of this disease there are three principal forms, differing from each other in certain particulars, but yet presenting several important features in common. These are color, configuration, location, course, absence of pain and pruritus, difficulty of cure, and termination.

The prevailing *color* of lupous lesions, or *Scrofulides*, as the French call them, is not the frank red of an acute congestion or inflammation, nor the coppery red of syphilis, but rather a violaceous red, with a shade of copper. It disappears under the finger, revealing, the instant the finger is removed, a somewhat yellowish hue, to be replaced a moment later by the color that was present before pressure was applied. The color is that which we would expect in a part containing more than the normal quantity of blood, but in which the circulation was sluggish, without, however, absolute stasis. Sometimes the lesions present a somewhat translucent appearance, like that which characterizes gelatinous bodies.

In *configuration*, lupous lesions usually exhibit a circular form, extending centrifugally not with the absolute circularity of Trichophytosis, but showing a strong tendency to it whenever the anatomical form of the parts on which the lesion is located will permit. Irregularity of configuration, dependent on location, is sometimes markedly shown in connection with some forms of lupus of the nose, in which the entire lesion may assume the appearance of a butterfly with extended wings. On the upper eyelid the lesion takes a linear or oval form, the long diameter corresponding with furrows of the lid. On the ear the patch is very irregular in outline.

The favorite *location* of Lupus is the face. The nose, cheeks, neighborhood of the eyes, temples, forehead and ears, may be primarily affected or become the seats of later lesions. I have also met with it on the scalp and on the penis. It may also appear on various parts of the general surface, usually, however, in connection with, or subsequent to the development of the disease on the face.

With a rare exception, to be mentioned later, the *course* of the disease is essentially chronic, and cases will be met with in which it has continued for five, ten, twenty, and even a greater number of years.

As a rule, there is neither *pain* nor *pruritus*. Sometimes the patient, on being asked, will state that there is slight itching, but I have never seen scratch-marks or other evidence of severe pruritus. If the lesion be extensive, a sensation of local heat is sometimes complained of.

The *difficulty of cure* is proverbial, and has been recognized from the earliest times. There is no known internal remedy that can be depended on to stop the progress of the affection in its various forms. Cures by internal medication have been reported, but the failures have far outnumbered them. External treatment is more promising, and of late years has been brought to a degree of perfection that enables the surgeon to state that the great majority of cases seen within a reasonable period after their commencement are permanently curable, except those in which the underlying diathesis is so pronounced that fresh outbreaks on parts other than those first affected, continually occur, to the great annoyance of the surgeon and the discouragement of the patient.

Except when the affection terminates in death, there is always a scar* left to indicate the site of the previous lesion. This is true both of the ulcerative and non-ulcerative forms.

The three principal forms of lupus are *Lupus erythematosus*, *L. vulgaris*, and *L. exedens*, the first two of which present certain subvarieties.

Lupus Erythematosus.

Syn.: Scrofulide érythémateuse.

Description.—Erythematous Lupus first appears as a small, reddish macule, in its earliest beginning, presenting no features that are sufficiently characteristic to enable its true nature to be distinguished. It slowly increases, and when it attains a diameter of a quarter of an inch or so, it can be readily made out as a very slightly elevated patch of peculiar color, dry, and sometimes a little scaly. The fine scales are not imbricated like those of psoriasis, nor loosely attached like those of pityriasis. On the contrary, a small speck of the stratum corneum partly loosens, presenting a free and unattached edge; but if traction be made, it will be found that the remainder of the scale is quite adherent. These partly detached scales may be found all over the patch, in some cases more freely developed than in others, but never heaped up in strata, as in psoriasis. The patch continues to extend, and in four or five years, sometimes sooner, may reach an inch in diameter. As a rule, before it quite reaches this size, a change commences in the centre; the color becomes less marked; the elevation subsides, and the skin looks thinner even than normal. In other words, atrophic changes in the skin are going on, and the ultimate result is the replacement of what was once normal skin by a white, depressed cicatrix. As these alterations proceed, the lesion still extends at its periphery, and we have presented an annular infiltration slightly raised above the normal skin outside it, and above the cicatrizing skin within. These processes may go on from year to year until the patch has involved a large extent of surface, half the face for instance, and during the entire period there may be no ulceration. Meantime, other patches may form and increase in size for an indefinite period. Sometimes the extension of the patch ceases spontaneously, and, after undergoing the atrophic changes mentioned, its seat is occupied by a blanched, depressed scar. This cessation of morbid action is rare, and can never be predicted beforehand.

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* Exceptions to this statement noted later.

When two or more patches are present, they usually appear in succession, but often exhibit a decided tendency to symmetry. The affection is essentially chronic, and the description given presents the principal features that appear in the majority of cases. Occasionally there appears to be special involvement of the sebaceous follicles, and the appearances are slightly modified accordingly.

There is, however, a second form of erythematous Lupus, apparently more common in Germany than here, and sometimes characterized, according to **Hebra** and **Kaposi**, by an *acute* course, and by the appearance of a large number of primitive macules scattered over an extended surface, or in some cases confluent. This variety, like the other, usually commences on the face, and the different spots may succeed each other slowly, or, occasionally with rapidity, giving the affection a somewhat acute character, and involving the trunk and extremities with hundreds of macules in one or two weeks. This form is further liable to certain complications. These are first, painful subcutaneous nodes of temporary duration; second, painful œdematous swellings of the skin and tissues about the joints; third, severe nocturnal osteocopic pains; fourth, hemorrhagic bullæ, adenites of the parotid, submaxillary, and axillary glands; fifth, erysipelas, which may be mild, or, on the contrary, severe and fatal.

Diagnosis.—The principal points on which to rely are the color, the slight scaliness, the chronic course, and the tendency to scarring. The only affections liable to be mistaken for it are chronic erythema, chronic scaly eczema, and syphilis. The absence of infiltration in the first of these should be sufficient to distinguish it from Lupus. In eczema the history of the eruption and its special features, together with the total absence of all tendency to the formation of cicatricial tissue, should make the diagnosis clear. A papulo-squamous syphilide might somewhat resemble an erythematous Lupus, but the lesions in the former disease would be far more numerous, they would not have lasted any great length of time, and the history of the case and concomitant symptoms would probably be sufficiently distinct to clear up any doubts.

Prognosis.—The prognosis of erythematous Lupus is good so far as any given lesion is concerned, provided it is not already too extensive; as in the majority of cases it can be controlled. A much more difficult undertaking, however, is to prevent the appearance of fresh lesions at other points.

Histology.—A few words concerning the histology of this affection will throw a certain amount of light on the course of the lesions, as well as give a clue to their successful treatment. On microscopical examination, the upper portion of the corium is found to be densely infiltrated with small cells. These, together with the normal connective tissue of the part, occupy more space than did the connective tissue alone, hence the slight elevation of the surface. This infiltration is undistinguishable *microscopically*, from many infiltrations occurring under other circumstances, but the cells of which it is composed resist change for a very much longer period than the cells found in simple inflammatory or in syphilitic infiltrations. In the former they may be present for a few days or weeks only, and in the latter for a few weeks or months only, but in Lupus they may persist apparently unchanged for months or years. Their presence, of course, causes pressure on the connective tissue, and this pressure leads to its atrophy. After an indefinite period, however, the cells begin to disappear, probably through fatty degeneration and absorption, and when they have entirely disappeared, we, of course, will not be surprised to find the integument thinner than normal, as a portion of its own particular structure had already been destroyed. The indication for treatment is, of course, to banish the infiltration at as early a date as possible, and before it has, to any great extent, interfered with the integrity of the normal tissues of the part.

The *treatment* of erythematous Lupus will be deferred until the other varieties of Lupus have been described.

LUPUS VULGARIS.

SYN.: Scrofulide tuberculeuse.

Description.—The typical lesion of Lupus vulgaris in its early stage is a soft, indolent, elastic tubercle of a yellowish or brownish violet color, and with a somewhat translucent aspect. This tubercle may exist alone, or may form one of a group of eight or ten. A single group may be present, or several others may be present on different parts. The lesion is exceedingly chronic, but gradually enlarges, and after attaining a certain size may persist indefinitely in that condition, and finally undergo resolution and disappear, leaving after it a depressed cicatrix. More commonly, however, superficial ulceration occurs, and the lesion becomes covered with a darkish adherent crust or scab. When this is removed the ulceration is revealed. In a short time it is covered with a fresh crust, and each time that this is removed—and some patients have a habit of frequently picking them off—the ulceration is found to be more extensive than before. The ulceration extends superficially, involving, perhaps, the entire thickness of the skin, but, in this form of Lupus, not going beneath it.

Occasionally a good deal of infiltration occurs beneath the group of tubercles, and newly formed connective tissue makes its appearance, the whole giving rise to an elevated or protuberant mass, to which the name of *hypertrophic* lupus has been applied.

Sometimes, on the other hand, well-defined tubercles do not appear to have time to form, but degenerative action commences early, and we have a group of pustules soon crusting over and covering an ulceration of considerable extent. This process goes on more rapidly in this than in the other form, and the floor of the ulcers are sometimes covered with irregular granulations simulating a warty or papillomatous growth. To this condition the name *verrucous* Lupus is sometimes given.

Diagnosis.—The only disease with which Lupus vulgaris is liable to be confounded is Syphilis. In the latter disease the lesions are more apt to be generalized, and their progress is much more rapid. In a few weeks Syphilis might entail a loss of tissue that would require months or years of lupous ulceration to effect. The ulcers of Syphilis have much more sharply cut margins than those of Lupus, and the amount of discharge is usually greater, and it possesses a peculiar diagreeable odor not met with in the latter disease.

Prognosis.—The prognosis is much the same as that of the erythematous. If taken in hand early, it may be eradicated without very much difficulty. The tendency to relapse, either at the site of the original lesion, or at other points, is not so great, I think, as in the other form. On the other hand epithelioma sometimes develops on the site of a long-standing lupous ulceration. In the transition period it is not always easy to determine * the actual presence of epithelioma. When, however, this disease is frankly developed, its characters are too distinct to be mistaken.

Histology.—The lupus tubercle consists in an aggregation of small cells among which larger poly-nucleated ones, known as "giant-cells," are sometimes found. The *treatment* of Lupus vulgaris will be considered later.

LUPUS EXEDENS.

SYN.: Lupus vorax.

Description.—This disease commences by the appearance of a soft tubercle, which slowly but gradually increases in size until it has attained the volume of a pea or small hazel-nut. By this time a crust will have appeared on its summit. On its removal an ulcer will be exposed. This gradually increases both as to area and depth, and after a time, five or ten years perhaps, the tubercle will have disappeared, and in its place we find a more or less extensive ulceration, characterized by irregular, overhanging margins of nearly normal or even less than normal consistence, with perhaps a softish tubercular development similar in character and appearance to the original tubercle. As the ulceration advances not only the skin but also the tissues beneath it are destroyed, leading to great disfigurement of the affected parts. During the progress of the affection additional and, not rarely, symmetrically developed tubercles may appear and slowly degenerate into ulcers. Before, however, these secondary developments have attained any great size the patient will probably have succumbed. In my own experience, phthisis pulmonalis has been the usual termination. The course of Lupus exedens is often exceedingly chronic, a case at present under observation having already lasted eighteen years. After a time, in some cases, the morbid action appears to change, and an epitheliomatous condition supervenes, evidenced by everted and hardened margins, and more or less pain. As a rule, Lupus exedens, pure and simple, is not specially painful. A portion only of the ulcer may become epitheliomatous, the remainder preserving its primitive lupoid features.

Histology.—In the cases which I have personally examined, the characteristic microscopic feature has been the occurrence of sharply defined aggregations of small non-stratified cells, without much or any diffuse cellular infiltration.*

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* Except by the aid of the microscope.

Diagnosis.—There are but three of the commoner affections with which Lupus exedens could, by any chance, be confounded. These are, Syphilis, Lupus vulgaris, and Epithelioma. In the first instance the duration of the lesion is sufficiently characteristic. In an early stage of Lupus exedens I must confess I do not know of any pathognomonic sign by which it may be distinguished from an early condition of Lupus vulgaris. In a late stage the depth of the ulceration is sufficient. From Epithelioma it is to be distinguished by the character of the primitive nodule, of the margin, the course and the frequently multiple lesion, the pain, finally by the microscropical appearances. In Lupus the nodule is softer than the surrounding normal tissue, in Epithelioma it is harder; in lupus the margin is irregular and often undermined and not hardened, in epithelioma, it is thickened, looking as if everted and hard. In lupus the progress is very slow, in epithelioma more rapid; in lupus there may be several lesions in different stages of development, in epithelioma there is rarely more than a single lesion; lupus is comparatively painless, epithelioma is frequently painful. In lupus exedens we have the microscopical features above spoken of, and without any proliferation of the stratum Malpighii; in epithelioma we find, in the early stages, prolongations downward of the stratum Malpighii, and later stratified cell-nests.

Prognosis.—In the early stages, that is, before the lesion has attained a diameter of more than one or two centimetres, the prognosis is good, provided the lesion be so situated that it can be thoroughly removed. The prognosis, however, becomes less favorable as the lesion increases in size, owing to the difficulty of removing the whole of it, until, finally, a condition may be reached, in which operative interference would not be justifiable, not alone in consequence of the extent of the lesion, but also the presence of a cachectic condition that in many cases would by this time have developed.

Etiology of Lupus.—There is little question in the author's mind that Lupus may very properly be considered as one of the expressions of the Scrofulous Diathesis. This is the view almost universally held in France and England and Italy, and only disputed, I believe, by the Vienna school, and a few of its adherents in this country.

THOMPSON (83) considers that Lupus is "but the local manifestation of a general disease," a view that is probably correct; and later English dermatologists, as WILSON, TILBURY FOX, ANDERSON, HUTCHINSON, and others believe that this general disease is the scrofulous diathesis.

TREATMENT OF LUPUS.

The extreme difficulty of successfully combating many, if not most, cases of Lupus, necessitates a very thorough consideration of every point bearing on the subject. In this, as in all chronic affections, the hygienic surroundings of the patient should first be inquired into. Is he living under the best conditions possible? If not, is it practicable to improve them? These points being satisfactorily settled, we come to what may be termed the *etiological treatment*, that is to say, the management of the underlying scrofulous diathesis. In many instances this diathesis does not present very pronounced features, and less attention may be paid to it, and the ultimate prognosis may be regarded more favorably. On the other hand, the most obstinate and continually relapsing cases are those in which we find the most marked evidences of constitutional impairment. The drugs that are supposed to be most useful in this connection are cod-liver oil and preparations of iodine and iron, together with a few others that have been less extensively employed. Among these, juglans regia, chlorate of potassium, small doses of mercury, etc., may be mentioned. Cod-liver oil deserves the first place, and may be given in almost any dose to advantage, and most usefully, I think, in the largest doses that the patient can bear. EMERY, of Paris, was the first to employ in Lupus what must certainly be considered very large doses of the oil, namely, from half a pound to a pound daily, with asserted advantage. Personally, we have in one instance given half a pound daily for several weeks, with apparent temporary benefit. We believe, however, that all the good that is attainable from the oil will be derived from doses much smaller than these, but yet larger than are ordinarily employed. Of the metallic preparations the Iodide of iron is the favorite, and probably the most useful. The ordinary dose of ten or fifteen minims of the officinal syrup two or three times a day, given in the oil or separately would be appropriate. With Juglans regia the author has no experience, but believes that the statements concerning it by NEGRIER (p. 72) deserve consideration.

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* I have elsewhere (87, pp. 103–114) quite fully discussed the histologyof the various forms of Lupus, both from the standpoint of my own observation and that of others.

Besides what may be termed the etiological treatment, additional internal medication will often be advisable, and energetic, local treatment will, in most, if not all cases, be requisite. The importance of local treatment will be appreciated when we consider the fact that we are dealing with lesions which tend to gradual extension and involvement of new regions by an apparently infective process similar to, but less in degree than that manifested by cancer. This infective quality is evidenced by the fact that, if a patch of lupus be incompletely destroyed, the disease will most certainly return. The plain indication then, is to remove the lupous infiltration as soon and as thoroughly as possible. From these general considerations we pass to treatment of the different forms of the disease.

Treatment of lupus erythematosus.—Internal treatment first requires notice. So far as I am aware, we possess no medicinal agents capable of exerting a specific or elective influence over the lupous process. It does not follow, however, that benefit will not ensue from the judicious use not only of the drugs already mentioned, but also of some others. Phosphorus is certainly capable of influencing the disease, but it is a two-edged sword that must be handled with great circumspection. How it acts in Lupus, I cannot say, but as we know that one of the pathogenetic effects of Phosphorus is the induction of fatty degeneration, it is not unreasonable to suppose that it induces fatty degeneration in the lowly vitalized lupous cells in doses that are insufficient to effect a like result in healthy organs.

Quite recently ANDERSON has introduced to notice an internal remedy that has proved of service in his hands. This is the Iodide of Starch, given in doses of from one to two drachms three times a day. I have, as yet, been unable to form an opinion concerning its real utility. BESNIER (**106**, '80, 698) states that he has cured two cases of erythematous lupus by the internal administration of Iodoform, in doses of from eight to fifteen grains daily. It is not wise, however, to rely on internal treatment alone, but in conjunction with it suitable local measures should be employed. The methods of local treatment at present in vogue endeavor to accomplish one of three objects, either to produce absorption of the lupous cells, to destroy them *in situ*, or to remove them mechanically.

The first of these methods has been extensively employed. Absorption of the infiltration, when limited, may sometimes be procured by the use of strong alkaline applications, such as the *Sapo Viridis, Liq. Potassæ*, etc.

The green soap, if employed, should be thoroughly rubbed into the part night and morning, until considerable reaction is induced. When this has subsided, the use of the soap is resumed, until, after a number of courses, the infiltration has disappeared, which will be the case in a certain number of instances. Instead of pure green soap, a mixture of four parts of soap with one of oil of cade may be employed, or the *Spiritus saponatus kalinas*, may be used. The *Liq. Potassæ* may be employed daily, or thrice or twice weekly, according to the degree of reaction produced. Instead of alkalies, acids may be employed, the most useful, in my experience, being the glacial, acetic, or the mono-chlor-acetic acids. Some of the French authors strongly recommend the use of the biniodide of mercury in ointment of sufficient strength to produce very decided local reaction. This method of treatment is certainly effective in a certain number of cases. The objections to it, however, are weighty. These are the length of time (usually several months) required to procure the absorption of a patch of even limited extent, and the pain and suffering that the patient has to undergo during this period. The second method—that is, the destruction of the lupus cells *in situ*—is more quickly effective, and, on the whole, accompanied with less inconvenience to the patient. In carrying this out several modes are at our command. First that of **Hebra**, which consists in thoroughly perforating the lesion with a pointed stick of nitrate of silver. This I have facilitated by using an irido-platinum needle (Fig. 10), coated by fusion with the nitrate salt.

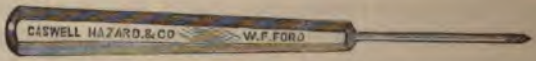

Fig. 10.—Irido-platinum needle.

Second, the method of **Dubini** * deserves mention. This consists in making hundreds of fine punctate scarifications, with some double-edged sharp-pointed instrument, as an ordinary lancet. The punctured spots should be covered with lint, well pressed on to stop the bleeding, and left attached till it falls spontaneously. The operation should be repeated in from two to four weeks, from three to eight operations being usually sufficient. **Vidal** † believes that he has improved on this procedure by employing linear instead of punctate scarification. He uses a scarifier of the form shown in the cut (Fig. 11).

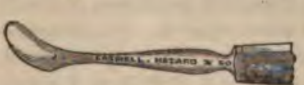

Fig. 11.—Vidal's lupus scarifier.

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* Rapp. dell' Ospedale magg. Milano, 1865.

† Du Lupus. Paris, 1879.

SQUIRE (116, 1/80, 654) believes that he has imparted still greater efficiency to the operation by the use of his multiple scarifier (Fig. 12).

The scarifications being made in one direction they are then to be crossed, as in the cut (Fig. 13). In a week the incisions will have healed, and the operation is to be repeated four or five times or more, if necessary. The pain of the operation may be controlled by local anæsthesia.

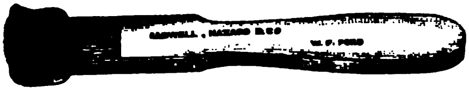

FIG. 12.—Squire's multiple scarifier, one-half size.

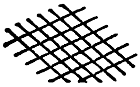

FIG. 13.

It is claimed that by this procedure the cells constituting the infiltration will undergo organization and transformation into connective tissue * and that very little, if any, scar will result. If relapse should occur, the operation is to be repeated.

The lupous infiltration may also be destroyed *in situ* by the application of powerful caustics, as chloride of zinc, Vienna paste, etc., or the use of the actual cautery.

The *mechanical removal* of the infiltration was first attempted by VOLKMANN,† with the aid of a small spoon-shaped curette. With this instrument the lupous tissue is removed by scraping. As the infiltration is softer than the normal tissue, there is no difficulty in removing *most* of it in this way, but unfortunately it is rarely possible to remove the whole of it. Removal of all the lupous cells, however, is the necessary condition of ultimate success. Healing occurs promptly after Volkmann's method, and the scar is a good one.

These are the methods chiefly in vogue among dermatologists at the present day, and if asked which is the best one, or what is the best method of treating this disease, I should be forced to reply that there is no one "best method," but that each case must be studied by itself, and the method adopted which seems best suited to it, and, as a general rule, a combination of two or more of the methods above mentioned will give, on the whole, more satisfactory results than an exclusive employment of any single one of them. Bearing in mind that the sole surgical indication is to remove or destroy the entire infiltration, and, to do it in such a manner as to inflict the least damage on neighboring structures, the probable efficiency of the different methods may be readily estimated, and their adaptability to a given case accurately determined.

For several years the author has entirely abandoned the use of alkaline or acid applications, employed with a view to procure absorption of the infiltration, the method being too tedious and too uncertain in its results to be recommended. This brings us at once to surgical procedures, and experience leads me to advise the following: If the patch be small and conveniently located, as on the cheek, forehead, etc., it should be immediately excised, together with at least one-sixteenth of an inch of apparently healthy surrounding integument. The edges of the wound may be approximated with a suture, the parts dressed with a lotion or ointment of calendula, and permitted to heal. If the patch have attained an area of one-half to three-quarters of an inch in diameter, and exhibits no evidence of commencing central interstitial atrophy, the dermal curette is brought into play and the diseased surface thoroughly scraped. The infiltration will break down like old cheese, while the normal integument will resist the action of the scraper. When as much of the infiltration as possible has been thus removed, and the surface of the traumatic ulcer thoroughly cleaned and dried, a potential caustic, or the actual cautery, should be applied. This is necessary, as it is impossible to remove, by scraping alone, all of the lupous cells; some of them at the margins of the infiltration extending into the apparently healthy adjacent skin. Of the potential caustics, the chloride of zinc, alone, or mixed with an equal quantity of the solution of the chloride of chromium, is, on the whole, so far as my experience goes, the most satisfactory. The caustic being applied, a little absorbent cotton (as much as will stick to the part), is pressed on, and the wound left to take care of itself. In from two to three weeks, sometimes longer, the crust will become detached, and the whole or greater part of the lesion will be found healed, or in a healing condition. The caustic is somewhat painful, and the swelling and reaction greater with the mixed chlorides than with the zinc alone. The mixture, however, appears to me to be more effective than either of the chlorides used by itself. The actual cautery (Paquelin's), however, is for several reasons better than the potential. First, the pain, except at the moment of application, is much less; second, the slough separates more quickly; third, the part heals sooner; fourth, there is less local reaction; and fifth, a better scar results. The lesion having been properly scraped and dried, the Paquelin is brought to as near a white heat as possible, and slowly moved over the surface, being kept in contact with the tissue long enough to produce an eschar about one millimetre or a little more in thickness. A bit of absorbent cotton is then applied, and without further dressing the wound is left to take care of itself, which it will usually do in the most satisfactory manner.

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* Besnier, 106, '80, 702.

† Lupus und seine Behandlung, 1870.

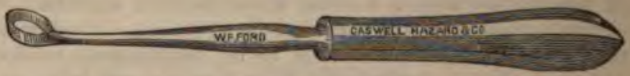

FIG. 14.—The author's dermal curette. Of this instrument I employ several sizes, the one shown being the smallest, and in the cut is reduced one-third in size.

If the lesion has existed for several years, and has attained an area of a square inch or more, the probabilities are that interstitial atrophy will be evident in the central and older portions, while the advancing margin will be in slight relief above the surrounding skin. In these cases the central parts already undergoing resolution do not absolutely require active treatment; but the advancing margin should be vigorously attacked. The curette should be employed, followed by either an efficient caustic or the actual cautery. The central portions may afterward be treated to advantage by multiple scarification, in order to transform the cells into fibres,* and thus procure an earlier and less depressed cicatrix than if the involution of the lesion is left to the unaided efforts of nature. While I consider the compound methods, just advocated, better than exclusive devotion to a single one, it must not be supposed that any plan of treatment yet devised is infallible. The tendency to relapse, or reappearance of the lesion in the cicatrix, is more frequent in Lupus erythematosus, I think, than in any other form of the disease; and the recurrence of the lesion may be looked for any time within a year after the operation. If this does not occur within a twelvemonth the case may be regarded as cured, unless fresh lesions shall have developed elsewhere in consequence of a strong constitutional predisposition in that direction. The whole question of relapse *in situ* resolves itself into the simple matter of thoroughness of operation. This *thoroughness*, however, must be tempered with suitable respect for the neighboring healthy tissue. It will not do to remove half the cheek to get rid of a pea-sized lesion. It is simply a question as to how much of the apparently healthy structure should be destroyed in addition to that which is manifestly diseased.

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* The statement of VIDAL that this will occur as a result of scarification at first seems hardly credible, but it must be remembered that organization and fibrillation of lupous cells sometimes occurs spontaneously in hypertrophic lupus vulgaris, as I have personally observed and elsewhere recorded (**87, 110**).

Treatment of lupus vulgaris.—The etiological and constitutional treatment of Lupus vulgaris will be much the same as that already considered, except that DR. ANDERSON does not recommend the iodide of starch in this connection. As regards the influence of internal treatment I must frankly confess that I have never succeeded in curing a case of Lupus by this means alone, nor have I ever seen a case that was so cured. It does not follow, however, that others may not have succeeded better; or that internal medication is without influence in this disease. It is well, therefore, to consider a few of the drugs that have been recommended and used in this connection. Among these *Arsenic* was recommended by Home, during the last century, and by many authors since, and cases of cure by it are on record; cases in which we have no right to doubt either the accuracy of the diagnosis or the veracity of the reporter. Personal experience leads me to credit the drug with some power, more especially in the ulcerative forms.

Mercury and *Iodide of Potassium* appear to have been used with benefit in a few cases of Lupus, although there is a faint suspicion that the cases may not have been genuine Lupus, but, in reality, cases of syphilis, presenting features that caused them to resemble the former disease. The internal treatment being provided for, the external claims attention. This, in principle, is the same as that mentioned in connection with the treatment of erythematous lupus, namely, to remove the lesion as quickly and thoroughly as possible. Temporizing with either sedative or so-called "stimulating" applications are worse than useless. They do more harm than good, the lesion must be *destroyed*, not petted or simply chastised. When the lesion is of moderate size, and conveniently located, the most effective treatment is excision. When, however, this is impracticable, other measures must be adopted. HEBRA speaks so enthusiastically of arsenical applications that I give his method in detail. He uses an ointment consisting of one part of arsenic, three parts of cinnabar, and twenty-four parts of ointment. This should be thinly spread upon linen, which is cut in narrow strips and accurately applied to the affected part. It is then covered with lint and held firmly in place with adhesive plaster. It is left in position for twenty-four hours, when a fresh application is made without previous washing. At the end of another twenty-four hours it is again applied. During the first day the parts to which the application has been made present very little alterations, and are not very painful. At the end of the second day of treatment, however, the pain increases, and when the plaster is removed the tubercles are found to have a grayish color and macerated aspect. After the third application the pain becomes still more severe, and the integument surrounding the lupus patch becomes the seat of considerable œdema. On removing the plaster at the end of the third day all the tubercles, both large and small, are found reduced to the condition of a brownish black eschar and covered with a thin pus. The eschars correspond to each tubercle, and are sharply defined by the intervening healthy skin. The pain ceases quickly and completely, and the œdema disappears in two or three days.

The great advantage, according to HEBRA, of this arsenical treatment consists in its not injuring or even excoriating the healthy skin, while the morbid tissue is safely and thoroughly destroyed.

The little sloughs, which are as numerous as the pre-existing tubercles, are loosened by suppuration, and removed in five or six days, leaving small holes separated from each other by islets of healthy skin. Cicatrization is rapid, and the resulting scar not very noticeable.

Sometimes two applications are sufficient ; or, on the other hand, if the tubercles are large and covered with thick epidermis, two or more courses may be necessary.

There are two serious objections to this arsenical treatment, the efficacy of which, however, is conceded. These are the excruciating pain, and the danger of arsenical poisoning.*

Arsenic, however, is not the only caustic that can be employed. The biniodide of mercury, the Vienna paste, chloride of antimony, Llandolfi's paste, and other compounds may be used. Whichever one of these is chosen should be used with a bold hand, as success will be proportional to the activity of the caustic and the thoroughness of the application.

The actual cautery has also been advised, but when dependence is placed on this agent alone, success need not always be expected. I cannot, however, quite coincide with the sentiments expressed by Green (**66**, 253), who writes: "The actual cautery is now generally agreed to be the least advisable of all the modes ever recommended for checking diseased, and inducing new and more healthy actions in Lupus. This means, indeed, often appears to be positively injurious instead of beneficial. I very lately saw the actual cautery applied, at seven different times, in a case of Lupus, under the direction of two eminent surgeons, and certainly the practice was followed by no good effect." Rayer (**86**, 2 : 211) is of a similar opinion. In other words, the actual cautery has often failed to check the progress of the disease, and, besides, has often done more harm than good. A little thought will enable us to understand why this has been the case. I presume it will be conceded without question that if a large quantity † of heat be employed, and the cauterizer kept in contact with the tissues sufficiently long, that any Lupus may be destroyed, but together with it in all probability a large amount of healthy tissue that should have been preserved. A red or a black heat coming from a cautery of large size will penetrate deeply, slowly destroying the surface with which it is in contact, and half killing the more distant tissues. A white heat, however, instantly kills the tissue to which it is applied, forming a carbonized eschar that acts as a non-conductor of heat, and protects the deeper parts. With the dull heat, then, we will have deeper action than we desire, followed by more or less pain and inflammation, a thick slough slowly separating, an ulcer not disposed to heal kindly, and a retractile scar. On the other hand, with the white heat, superficial action with insufficient destruction of the deeper portions of the lupous tissue, and, as a natural consequence, relapse of the disease. The successful use of the cautery, therefore, necessitates such an adjustment of the heat and period of contact that the whole of the lupous infiltration is destroyed without the infliction of unnecessary injury on the healthy tissues. This requires extended experience in the use of the cautery, and the exercise of good judgment in its application, and readily explains the unsatisfactory results that have so often followed its use.

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* HEBRA states that poisoning did not occur in any of the cases treated by him.

† The differences between the *quantity* and the *intensity* of heat should be clearly appreciated. A large cauterizer at a red heat may give off a larger quantity than a small one at a white heat, but the latter will possess the greater intensity.

The actual cautery, however, is not without its uses in the treatment of Lupus Vulgaris, as I have elsewhere (**143**, June, '77, 449, and **143**, April 5, '79, 313) endeavored to show, but its application is secondary to other measures. If the lesion be a suitable one for excision, subsequently apply the cautery at a white heat if any doubt exists as to the thoroughness of the cutting operation. When, however, excision is impracticable, the lesion should be scraped with the curette, with the view to remove as much of the infiltration as possible, and then cauterized. After the scraping, a chemical caustic may be employed instead of the actual cautery. I have used both, but the latter has given me the most satisfactory results. Relapse, however, will sometimes occur, and render a second or even a third operation necessary.*

Treatment of lupus exedens.—The treatment of this form of Lupus is to be conducted on the same principles as hold in the other varieties. When the lesion is of comparatively small size, as in the first years of its existence, it should be extirpated, if possible, with the knife. If, for any reason, this is impracticable, scraping, followed by the actual or potential cautery, will give the best temporary result, and also the best guarantee for the future.

When, however, the lesion has already attained a large size, as two inches or more in diameter, and extends deeply beneath the corium, the condition may almost, though not absolutely, be regarded as hopeless. The question of the amount of scar or deformity to be left after surgical interference, no longer enters as an element to be considered in deciding the character of the operation, which should be thorough and radical in the extreme. Both the curette and the knife must be brought into play, and every ramification and trace of the disease be removed, so far as it can be mechanically. After the bleeding has ceased, and the wound cleansed, the parts should be thoroughly cauterized, preferably, I think with the pure chloride of zinc, and the cavity packed with absorbent cotton.

In two or three weeks the slough will have separated, and if the patient be possessed of sufficient vitality—and he should not be operated on unless he does—a healthy ulcer, with tendency to heal, will present itself. In a few weeks more, however, there may be at one or more points indications of relapse. These must be immediately attacked, and, by carefully watching for and destroying these fresh outcroppings, the surgeon will be able, in a certain number of cases, to control the disease. In this, as in all the varieties of Lupus, one general statement may be made, and this is that half-way measures do more harm than good. Attack the lesion in the most vigorous manner, or leave it entirely alone.

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* I have once, and once only, been obliged to operate a fourth time on the same lesion.

The following drugs, besides those already mentioned, have been recommended in the treatment of Lupus:

Internally.—*Arsen. Iod.*, 28; *Aurum*, 29; *Barii Chlorid.*, 31; *Calcii Chlorid.*, 34; *Chimaphila*, 41; *Citrus Limonum*, 45; *Ferri Arsen.*, 54; *Hydrarg. Chlor. Corros.*, 64; *Hydrarg. Chlor. Mite*, 64; *Hydrocotyle Asiat.*, 68; *Ol. Gynocardiæ*, 78; and *Silica*, 105.

Externally.—*Acid. Acetic.*, 5; *Ac. Carbol.*, 6; *Ac. Chromic.*, 7; *Ac. Citric.*, 8; *Ac. Hydrocyan.*, 8; *Ac. Pyrogallic.*, 10; *Ac. Salicyl.*, 11; *Ammon. Iodid.*, 15; *Bals. Gurgun.*, 30; *Cantharis*, 39; *Hydrarg. Iod. Virid.*, 65; *Hydrarg. Nitras*, 66; *Sulph. Iodid.*, 109; and *Zinci Acetas*, 116.

MILIUM.

SYN.: Grutum; Acne miliaris.

Definition and description.—The affection known as Milium is characterized by the development, in the superficial layers of the skin, of a number of minute white papules looking something like small grains of sand. They are in reality sebaceous follicles, with occluded openings, distended by sebum. Their favorite seat is the neighborhood of the eyelids, although they are sometimes met elsewhere. They are usually quite numerous if the affection has existed for any length of time, but their course is indolent; they are painless and unaccompanied with inflammatory symptoms. They are most frequently met with in females, and rarely appear except in adults.

Diagnosis.—The diagnosis is simple, as no other cutaneous affection resembles this one in appearance.

Prognosis.—Milium rarely, if ever, produces any inconvenience except so far as it detracts from the comeliness of the visage. The tendency of the affection is toward increase in the number of the little granules, but they rarely attain a size larger than that of the head of a large pin.

Etiology.—The causes which produce this occlusion of the sebaceous follicles are absolutely unknown.

Treatment.—The principal indication is to remove the little granules as soon as they become large enough to permit of operative procedure. The instrument usually employed for this purpose is an ordinary lancet with which the stratum corneum that covers them is divided. The little grain is then dug out with the point of the instrument. To facilitate their extraction we have employed a needle-like instrument with a curved lanceolate point, as shown in Fig. 15.

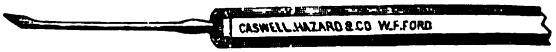

FIG. 15.—Milium needle.

This little needle is quite similar to the one used by oculists in connection with the treatment of cataract. The needle is introduced in such a way that nearly the whole of the epidermis is removed from above the granule. Then, by a dexterous turn, the little tumor is pried out. After a little practice a large number can be removed in a very short space of time. To prevent their continual formation it is well to stimulate the functions of the skin, and to endeavor to keep the mouths of the follicles open by frequent frictions and the free use of soap and water about the affected parts. I am not acquainted with any internal medicines that possess the slightest influence over the affection.

MOLLUSCUM.

Syn.: Molluscum contagiosum; Acne varioliformia.

Definition and description.—We confine the term molluscum to an affection characterized by the development of small tumors of peculiar aspect, scattered more or less freely over the surface. These little tumors, or more properly tubercles, vary from the size of a hempseed to that of a pea. They are sessile or pedunculated, and each is furnished with a small depression or umbilicus, from which, by pressure, a thickish white substance, like sebum, may be made to protrude. Their color is usually that of the normal skin, but may be a little redder, with sometimes a translucent aspect. The little tubercles are most frequently met with on the face, but are sometimes encountered on the neck, chest, back, limbs, and genitals. Their number varies from three or four to twenty or thirty, or possibly more. They do not appear simultaneously, but successively, coming out one after another for weeks and months, so that in advanced cases they may be encountered in various stages. Having attained a certain size they may so remain for an indefinite period, but after a time usually discharge their contents, dry up, and shrivel away. Sometimes inflammation and suppuration occur. The affection is met with at all ages and in both sexes, but the majority of cases have been observed in young females. It has been frequently encountered simultaneously in several members of a family, and has thus given rise to the idea that it may be contagious. This point, however, cannot be considered as definitely settled, although the weight of evidence appears to me to be in favor of the contagion theory. The eruption is unaccompanied with pain or other subjective symptoms, and does not appear in any way to influence the general health.

Diagnosis.—The diagnosis is simple, as there is no other affection characterized by the same special lesion that this is—namely, small pedunculated tubercles, which on pressure yield a whitish substance, that on microscopical examination is found to contain certain translucent, roundish, or oval bodies, commonly known as "molluscum corpuscles."

Prognosis.—The prognosis is good, as the disease is perfectly and speedily curable.

Ætiology.—The affection under notice has its early seat in the stratum Malpighii, and not in the sebaceous glands, as maintained by some,* but the nature of the process is an obscure one, and if the prevalent view concerning its contagious nature be abandoned, we are utterly at a loss to account for its origin and development.

Treatment.—The treatment of molluscum is exceedingly simple. All that is necessary is to destroy the tubercles that are present at the time of the patient's visit, and subsequently a few more that were hardly large enough to be seen the first time. The destruction may be accomplished by shaving off the tubercles at the level of the skin, squeezing out the remainder of their contents, and then applying a nitrate of silver point, or a red-hot needle to the little cavity that remains.

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* For the detailed evidence on this point the reader is referred to 87, 344.

Bateman (57) states that the internal use of arsenic is of service. I have never tried it, as the external measures just spoken of are usually sufficient. Sometimes the tubercles are so closely grouped as to become almost confluent and to form a patch of some size. In these cases, instead of using the knife, their destruction may be effected by the use of alkaline caustics.

NÆVUS.

Definition.—The term Nævus includes certain congenital deformities of the skin, characterized by localized hypertrophy of the cutaneous vessels, localized hypertrophy of hair formation, or localized increase of pigment. These have received the names of Nævus *Vascularis*, N. *Spilus*, and N. *Pigmentosus*, and are of sufficient importance to warrant separate consideration.

Nævus Vascularis.

Definition and description.—Nævus Vascularis is simply a localized increase in the size of the capillary blood-vessels distributed to the skin and subcutaneous tissue, and as one or both of these organs are involved, the disease will possess a more superficial or more profound character. Nævus vascularis is usually a congenital affection—that is to say, it is usually noticed at the time of birth, or shortly after, and when first perceived may present a lesion not larger than a pin's head. The three important forms of nævus vascularis are the superficial or flat, the deep, and the tuberous. The flat form, called "wine-mark," appears at first sight to be nothing more than a red or purplish macular staining of the skin. On closer inspection, however, this color is found to be due to the blood contained in abnormally enlarged capillaries. This nævus may be single, and a mere macule not larger than a split pea, or may be coin-sized, or even a large patch involving half the integument of the face; or there may be several patches of somewhat irregular form scattered over different parts of the body. The lesion may be perfectly flat and without the slightest elevation, so that by touch alone it would be difficult and even impossible to distinguish the abnormal from the normal portions of the integument. In other cases the affected portions convey to the finger a slight sensation of fulness. The affection in the flat form appears to be confined to the papillary vessels, or more probably to the vessels constituting the superficial cutaneous plexus.

In the deep form the larger vessels of the deep cutaneous plexus, together, sometimes, with those of the subcutaneous tissue, are implicated, and a more or less prominent tumor is formed, the outermost strata of the skin being, perhaps, not much altered, except by being pushed out and stretched over the tumor.

The tuberous form involves the vessels of both the superficial and deep plexus, and constitutes a projecting tumor of varying size, the degree of capillary enlargement varying also in different cases.

Besides these there are certain mixed forms in which all the vessels of the skin, as well as those of the connective tissue, are implicated. These nævi present the characters of tumors more or less sharply defined, of doughy or spongy feel, and capable, by pressure, of being greatly reduced in size, but returning to their previous dimensions on removal of the pressure. The tumors themselves may have a smooth and rounded outline, or, on the other hand, may be studded with irregular projections. The color is always darker than that of the normal skin, and varies in hue between that of arterial and that of venous blood. Sometimes while the prevailing tint may be venous, limited points present a bright arterial color.

Course.—The lesions mentioned pursue an indefinite course, and one that cannot be predicted in advance. On the one hand they may never increase in size, but having existed a certain length of time may gradually disappear.

Secondly, they may increase more or less rapidly for a time, then come to a standstill, or after a time retrograde.

Thirdly, they may increase slowly or rapidly, and in doing so inflict serious damage on surrounding parts, or, by rupture of some of the distended vessels, severe and even fatal hemorrhages may occur.

Fourthly, they may undergo malignant degeneration.

Diagnosis.—In the simple or superficial form—the so-called wine-mark—unless very minute, no difficulty need be experienced in diagnosis. The very small and bright colored ones are, however, to be distinguished from Angioma, which is an acquired and not a congenital affection. In the deep and tuberous forms the diagnosis rarely presents the slightest difficulty, the color, the spongy texture, the diminution of size on pressure being the characteristic features. That one may be deceived in these respects, however, I know from personal experience, as some years ago I dissected out a tumor, the size of a pullet's egg, in the presence of two accomplished surgeons, who after careful examination agreed with me in the diagnosis of nævus. Examination of the tumor, after the operation, revealed the fact that it was a melano-sarcoma and not a nævus.

Prognosis.—The prognosis in Nævus is a little uncertain. In the superficial wine-mark form, it must be confessed that no method of treatment yet devised has been followed by brilliantly gratifying results. In the other forms the prognosis is usually good, that is, the affection can generally be controlled, but frequently this is not very readily accomplished.

Treatment of the superficial form.—The object of treatment is to lessen the deformity by removing the high color, and bleaching it down to a normal hue. This can, of course, only be done by destroying the continuity of the enlarged capillary vessels, so that the excessive amount of blood shall not flow through them, and the means of accomplishing this must be such that the bleached portions do not become the sites of cicatrices that would be more disfiguring than the original lesion itself. A number of methods have been proposed with this end in view. The writer has treated two small wine-marks with fairly good result by means of electrolysis employed in the following manner: A Carroll's Vaccinator (Fig. 16) was attached to the negative pole of a constant current battery, the positive pole being

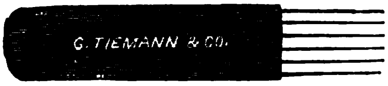

FIG. 16.—Carroll's vaccinator.

brought into contact with the integument near the nævus through the medium of a moistened sponge. The needles were then introduced in a slanting direction, and quite superficially, into the affected part of the skin, and a current of moderate intensity permitted to flow for a few moments. As soon as it was perceived that electrolytic action had fairly taken place, the needles were withdrawn and introduced in a fresh place. The operation is somewhat painful, and the number of operations required will depend on the size of the lesion and the sensitiveness of the patient.

The most widely heralded operation of late years, is that proposed by SQUIRE, and consists in linear scarifications, accomplished with the aid of a knife having a large number of parallel blades (Fig. 12). The operation consists in making with the knife, the parts being previously frozen, a number of oblique incisions through the integument. A week later the incisions are repeated in the opposite direction, and the operation is repeated as often as may be necessary, until the mark is sufficiently bleached. As far as I am aware, this operation has not been followed by satisfactory results in this country, or in Europe, except, perhaps, at the hands of its author.

A method in which I have more confidence is that proposed some years ago by DE SMET (**163**, Nov. 2, '73), who operated on a small superficial nævus as follows: Fifteen sewing-needles were passed through a cork so as to allow their points to project about one line; the points were so arranged as to represent, as nearly as possible, the form of the nævus, and the direction of its chief vessels. The cork was then dipped in croton-oil, and having been applied exactly over the nævus, the points of the needles were quickly forced into the part. Though painful at the moment, this inoculation only left after it a slight sense of heat and pricking.

SHERWELL has modified this process and adapted it to more extensive marks. He describes his procedure as follows (**110**, 3 : 215): "I take a number (say eight) of common No. 6 or No. 5 sewing needles, first sharpening and somewhat roughening their cutting edges with a fine flat file at and for a short distance from their points, and then by means of heavy sewing-machine silk, well waxed, wrapped around the upper two-thirds of each in turn, and all together, form a fasces-like bundle, the points being somewhat less than one-sixteenth of an inch apart; thus prepared, take either a saturated or a fifty per cent. solution of carbolic acid, or a twenty-five to forty per cent. solution of chromic acid, in a shallow vessel, and dipping the points of the needles therein, make a series of punctures into the skin of the affected region. . . . . After the usually very slight bleeding ceases, which it does all the quicker for pressure, and also the sanious oozing which sometimes takes a little longer (pressure being kept up the whole time), I wipe the place off with a little alcohol, and apply quickly a thick layer, or rather two or three layers, of collodion over the whole surface treated, and over a moderate margin beyond, as being the best means, by its contraction, for keeping up permanent compression. I am convinced that it does this the better on account of the natural tendency of the treated parts to become swollen, so that we have, as it were, a strangulation of the pierced and irritated vessels occasioned by the pressure from within as well as from without, which leads to their more certain obliteration from the adhesive inflammation sure to follow."

SHERWELL has more recently (**143**, Jan. 3, '80) employed an instrument specially designed for the purpose and shown in the following cut (Fig. 17).

The needles are the ordinary straight saddler's needle of small size, but grooved far down on each of the three sides. The degree of desired penetration being decided on, this is regulated by the screw collar, then the needles being drawn up, and the instrument firmly pressed against the skin, the spring is released and the needles quickly penetrate the skin, carrying with them the fluid with which they have been previously charged.

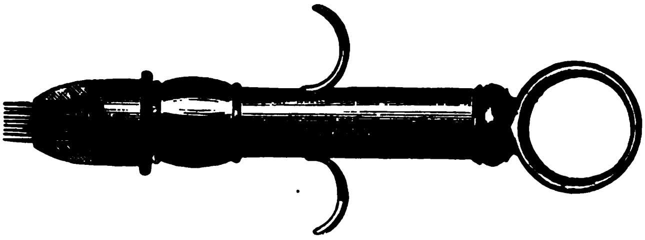

FIG. 17.—Sherwell's cutipunctor. (The instrument itself is much larger than shown in the cut.)

I have not as yet employed DR. SHERWELL's instrument, but have devised another for the same purpose, consisting of a bundle of nine hypodermic syringe points firmly imbedded in metal. The form of the instrument is shown in the cut (Fig. 18).

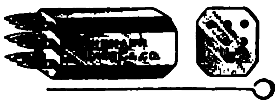

FIG. 18.—The author's cutipunctor.

This instrument is intended not only for the treatment of nævus, but for all other occasions in which it is desirable to carry medicated fluids beneath the surface. The needles being dipped in the chosen solution, take up, by capillarity, a small quantity of it, which, after insertion, they yield up to tissues. A considerable quantity of fluid can be introduced if the operator adjusts a rubber tube to the end of the instrument and sucks up some of the fluid, which can afterward be blown into the part that is operated on. The operation is facilitated and rendered painless by the use of ether spray.

The following method is said to have been successful at the hands of MR. WILLIAMS (**116**, 1/80, 674). The aim of the treatment was to induce stasis in the dilated capillaries, plastic effusion, and consequent contraction sufficient to induce obliteration of the mark without producing a scar. A mixture of carbolic acid and glycerine, in the proportion of three to one, was painted over the mark with a bristle brush; the destroyed epidermis was rubbed off with the end of the wooden handle, and the painting repeated. A cornified scale soon covered the mark, and separated in about eight days; after which the process was repeated three or four times.

Treatment of deep-seated and tuberous nævus.—This requires, as a rule, quite a different course of procedure from those just noticed. The various methods that have from time to time been recommended are almost too numerous to mention, and the choice between them is to be guided in part by the results attainable, and in part by the size, location, or other peculiarities of the individual case under notice. The comparative safety or danger of the different operations is also to be taken into consideration. These are matters that specially call for the exercise of good judgment on the part of the surgeon. For the treatment of smaller nævi, that is up to one or two centimetres in diameter, a number of procedures are applicable.

First.—The tumor may be injected with a coagulating fluid, as one of the salts of iron. This has been frequently successful, but it is not devoid of danger, as coagula have been carried into the circulation, and fatal embolism has resulted.

Second.—Fluid extract of ergot may be injected (HAMMOND) with a view to inducing contraction and diminution of the calibre of the vessels.

Third.—Setons may be introduced for the purpose of exciting adhesive inflammation.

Fourth.—In an unvaccinated person the insertion of the cow-pox virus has excited sufficient inflammation to obliterate the growth.

Fifth.—Electrolysis may be employed. This, as is well known, consists in the introduction of properly insulated needles connected with a galvanic battery. The best material for the needles is irido-platinum; the one connected with the positive pole should certainly be made of this or of some other hard non-oxidizable metal. The negative needle may be gilded steel. Some writers recommend that the positive needle alone, others that the negative needle only, be introduced into the tumor, the circuit being closed with a sponge-covered electrode connected with the other pole and applied to the neighborhood of the nævus. Personally I prefer to introduce both the positive and negative needles at the same time into the tumor. It must be recollected, however, that the effects produced by the different needles is not the same. The positive needle causes coagulation of the albuminous fluid in immediate contact with it, and a small tubular, somewhat adherent clot, forms immediately around it. At the negative needle no coagulation is effected, but rather the contrary—that is, decomposition (true *electrolysis*) of the surrounding fluid with destruction of the tissues. After the galvanic current has passed for a suitable time, the needles are withdrawn. The negative needle comes out readily, but the positive sticks a little and will require a little force for its withdrawal. It is better not to use this force, but for a moment before withdrawal to reverse the direction of the current, which changes the former positive needle into a negative one, and permits its ready extraction.

Sixth.—The actual cautery may be used. I well remember the first time I saw this method employed, nearly twenty years ago, at the hands of my preceptor, PROF. WILLARD PARKER. The instrument used was a common shoemaker's awl, heated in the flame of a spirit-lamp. This, brought to a dull red heat, was several times plunged into the tumor. A somewhat better instrument is provided with a solid metallic globe, as shown in the annexed cut, Fig. 19.

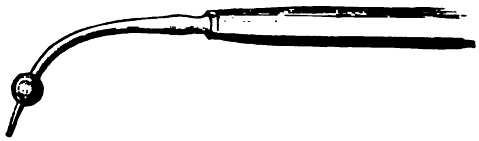

FIG. 19.—Small cauterizer.

The globe serves as a reservoir of heat, and permits the operation to be performed with more deliberation, and even allows several punctures to be made without reheating. The galvano-cautery may be used instead, but is not equal in convenience to a fine pointed Paquelin cautery (Fig. 20). The point which I usually employ is of the form and size here shown. The point should not be brought to a white or even a bright red heat, as hemorrhage would be likely to follow its introduction. It is better, having heated it to a red heat, to let it cool until the color is just about to vanish and then introduce it. A few puffs on the rubber bulb of the instrument preserves the heat in readiness for the next puncture.

Seventh.—The nævus may be excised, as particularly recommended by DR. GEORGE BUCHANAN (**116**, 1/75, 831).

Eighth.—The tumor may be ligated. The ordinary methods of ligating nævi are fully considered in most works on surgery, and to these I must refer the reader for details as to the operation. A modification of the ordinary ligature operation has been recently devised by MR. RICHARD BARWELL, and is described as follows (**137**, May 8, '75):

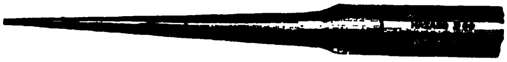

FIG. 20.—Fine point belonging to the Paquelin cautery.

"Having carefully made out the limits of the nævus, both as to its depth and circumference, a needle, armed with not too fine a wire, is passed through the skin half round the tumor, and out again opposite the place of entrance; the needle is then again introduced at the same puncture by which it had just emerged, and, passing round the other side of the tumor, makes its final exit at the opening first made.

"In certain cases, large size or peculiar shape of the tumor may render it necessary to bring out the needle twice instead of only once. However that may be, the effect is to enclose the base of the tumor in a wire loop, both ends of which, emerging at the same opening, are under perfect control. These might merely be twisted together till the requisite tightness is attained, but in this practice certain inconveniences arise, which I have obviated by another expedient. A vulcanite oval plate, about three-fourths of an inch long and an eighth of an inch thick, has two holes bored obliquely through its thickness; and on its external surface two little studs project close to where these holes emerge, and where, also, they are farthest apart (Fig. 21).

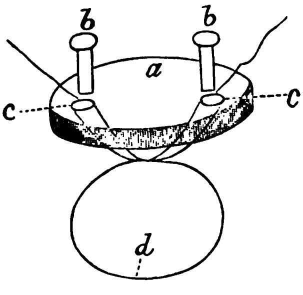

FIG. 21.—*a*, vulcanite disk; *b*, brass studs; *c*, holes pierced obliquely in direction of dotted lines; *d*, wire looped as in surrounding a nævus.

"By bringing the end which passes by the right side of the nævus through the left hole, and *vice versâ*, the wire is made to cross, while the oblique direction of the holes permit it to run smoothly. The surgeon having thus arranged his appliance, draws upon the wires until the nævus is rather tense, and then twists each end round the nearest stud. A piece of lint, slit so as to bestride the wire, is introduced between the skin and the vulcanite button, and prevents any undue pressure by the edges of the plate.

"On the third or fourth day the wire will have become somewhat loosened; one of the ends is to be untwisted from the stud, drawn tight, and again secured. This process is to be repeated until the wire comes away, when, as must be evident, it has not merely strangulated, but has cut through the base of the nævus with all its vessels of supply; in fact, it has acted as a slow but sure écraseur."

Of the various methods for the treatment of Nævus, it must be remembered that while all have yielded good results, all have sometimes proved disappointing even at the hands of skilful surgeons.

NÆVUS PIGMENTOSUS.

Definition and description.—Nævus pigmentosus, or pigment mole, is either a simple macular discoloration or a somewhat elevated and dark-colored excrescence, visible at the time of birth, and rarely undergoing change,* except as to size, which may increase in relative proportion to the general bodily growth.

Treatment.—The macular form is rarely meddled with; the elevated form may be destroyed by caustics, electrolysis, the actual cautery, or excision.

NÆVUS SPILUS.

Definition and description.—This is an usually elevated mark, more or less thickly covered with hair, and frequently accompanied with increased pigment deposit. The color may vary from a shade hardly darker than the normal skin to a hue approaching that of the negro. The hairs may likewise be little more than downy and colorless, or they may acquire an appreciable thickness and color. These nævi are found on every part of the body, exist in any number, and vary in size.

Treatment.—The appearance of these nævi would, of course, be improved by the destruction of the hairs. The various depilatories are not to be relied on, as their action is very superficial, and their effect but temporary, the hairs soon growing again, and sometimes more vigorously than before. It is necessary to destroy the hair papillæ, and as this is located quite deep in the skin, especially in the case of the larger hairs, we would be obliged to destroy nearly, if not quite, the whole thickness of the skin. This can, of course, be effected with caustics, but then is apt to leave unsightly scars. In a few instances I have improved the appearance of the nævi by destroying the hair-follicles and papillæ by an electrolytic process first published by me five years ago† (87, 307).

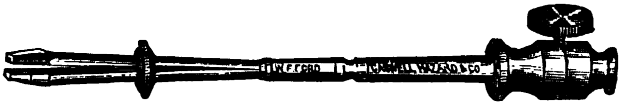

FIG. 22.—Needle-holder for electrolyzing hair-follicles.

The implements required are an epilation forceps, a very fine steel needle, a needle-holder (Fig. 22), and a galvanic battery. A hair is removed with the forceps, and the needle connected with the negative pole of the battery, inserted into the empty follicle. The galvanic circuit is then closed, and in about half a minute the follicle will be destroyed. The operation requires patience, practice, and sharp eyes, assisted sometimes with a lens. It is only the larger hairs that it is practicable to deal with in this way.

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* They sometimes undergo malignant degeneration.

† Unknown to me at the time, Michel, of St. Louis, had employed electrolysis for the destruction of distorted hairs connected with the eyelids.

Small and favorably situated hairy nævi may sometimes be excised; if very prominent they may be shaved off down to the level of the skin.

PEMPHIGUS.

SYN.: Pompholyx.

Definition and description.—Pemphigus is a chronic affection of the skin, characterized by the development of bullæ, from the size of a pea to that of an egg, upon any portion of the body. They may be few or numerous, but if many be present at the same time they are sometimes found aggregated in little groups of three or four together. Their contents are usually serous and transparent; but sometimes the admixture of a little pus renders the fluid slightly opaque. Of Pemphigus, one of the older writers described ninety-seven varieties. For present needs, however, two will suffice. These are Pemphigus vulgaris and Pemphigus foliaceus. It will be best to describe them separately.

PEMPHIGUS VULGARIS.

In this form the bullæ, well distended by fluid, persist unchanged for several days, at the end of which time they rupture, and discharge a thin, not very plastic fluid, differing greatly in this respect from the plastic exudation of eczema. Sometimes the stratum corneum reapplies itself to the skin, and remains in contact until the surface beneath is entirely healed and covered with a new epidermis. It is then shed, and reveals a circumscribed reddened surface, which soon, however, regains its normal color. At other times the covering of the bullæ is detached soon after rupture, and displays a red and oozing surface. This becomes drier as the new-formed, horny layer replaces the old, when the heightened color gradually fades away. After the disappearance of the bullæ, which marked the invasion of the disease, or even before they are completely gone, fresh ones may arise, or, on the other hand, several weeks may elapse before a recurrence takes place. These relapses may prolong the disease for an indefinite period. Finally, either spontaneously or as the result of treatment, no new bullæ appear, and the patient is well. This favorable termination, however, does not always occur; but the affection persisting for several years, the patient is carried off by some intercurrent disease.

PEMPHIGUS FOLIACEUS.

This form differs from the other mainly in the fact that the bullæ are not *filled* with fluid, that is, the epidermic covering is not tense or stretched but somewhat flaccid. The bullæ are often of large size, forming flattish fluid tumors as large as the hand. Bullæ, arising in close proximity to each other by mutual extension, become confluent, and the epidermis at the same time appears to thicken. The eruption may be limited in distribution, or may invade several regions. If the thickened epidermis is stripped off, the reddened surface will be found covered with a whitish exudation resembling a diphtheritic membrane.

Course and prognosis.—In ordinary Pemphigus Vulgaris the general health may not suffer in any marked degree, or, at all events, until after a considerable period of time. In some cases, however, after the lapse of a year or two, if the disease is not checked, debility and progressive asthenia may bring the affection to a close. In foliaceous pemphigus these symptoms set in earlier and are more marked, and the disease usually proceeds to a fatal termination.

Diagnosis.—Pemphigus is closely imitated by a number of anomalous and as yet unclassified eruptions, which are characterized by the development of large vesicles or bullæ. These, however, all have an acute course, and by this means are to be distinguished from the disease under consideration.

Etiology.—The causes of Pemphigus are unknown.

Treatment.—Until within a very few years most authorities believed that very little could be done for this affection by internal treatment, and some German writers appear to be of this opinion still.

Hutchinson, however, states that he has been uniformly successful in controlling and curing the affection by means of Arsenic. The author, and others in this country, have had a like favorable experience with this drug in the disease under notice. The drug should be given in full doses, and continued for some time after the eruption has ceased to appear.

The *local* treatment is not without importance. That which I have found most serviceable is to rupture the bulla as soon as it appears, sop up the fluid with a soft rag, and then apply the nitrate of zinc to the raw surface. The pain, at first sharp, soon passes off; the patient suffers little subsequent inconvenience from the lesion. It will, moreover, usually heal in about one-third the time it would take if left alone.

The following drugs have been recommended: *Acidum Nitricum*, 9; *Acid. Sulphuric.*, 11; *Argent. Nitric.*, 21; *Liq. Calcis*, 37; *Calx Chlorinata*, 38; *Quinine*, 45; *Collodium*, 46; *Linum*, 74; *Potassii Chloras*, 92; and *Rhus Tox.*, 99.

PERNIO.

SYN.: Erythema pernio; "chilblain."

Definition and description.—This affection, so common in cold climates, affects, by preference, the feet, hands, nose, and ears, and consists in a condition of chronic congestion, accompanied with lowered local vitality, resulting from partial congelation of the parts. It is characterized by redness, usually with a purplish tinge, together with more or less pain of a burning character. In severe cases fissures and ulcerations sometimes form. The affection, or rather the disposition to it, often lasts for years, giving little or no trouble during the summer, but causing inconvenience and suffering as cold weather sets in.

Etiology.—The affection is due, in most cases, to a partial freezing of the tissues, followed by a rapid thawing out; as, for instance, a person, after prolonged exposure to cold, imprudently enters a heated room, and seeks a place nearest the fire. Tramping about in melting snow may reduce the temperature not quite to the freezing point, but sufficiently near it to materially retard the circulation. If now the feet be gradually and slowly warmed by friction, etc., little harm may result, but if rapidly warmed and overheated before a hot fire, the reaction will be too sudden, and chilblains are apt to result.

Treatment.—Remembering that the condition is one of lowered local vitality, the chief indication will be to employ stimulating applications. Those most in vogue are frictions with camphorated oil, turpentine, capsicum, and the like. For a number of years the author has employed the galvanic current with the utmost benefit. When the feet are affected, the patient is seated so that one buttock rests on a sponge-covered plate connected with the positive pole of the battery. The corresponding foot is then placed in a basin partially filled with salt water, and into the basin the other electrode is placed. The current is now permitted to flow, and its strength is so regulated that the patient shall just perceive a slight sensation of warmth. The *séance* usually lasts for about ten minutes for each foot, and is repeated two or three times a week. The current seems to more or less completely restore the vitality of the part; and under its influence I have seen obstinate pernial ulcerations heal without the employment of other treatment. In milder cases the relief of the itching and burning is sometimes very striking. Possibly the faradic current would act as well as the galvanic, but on this point I cannot speak from experience.

The following drugs may also be considered: *Acidum Tannicum*, 12; *Arnica*, 22; *Hyoscyamus albus*, 69.

PHTHIRIASIS.

SYN.: Pediculosis.

Definition.—Phthiriasis is the name given to a zoöparasitic disease caused by an invasion of the skin by lice, of which there are three kinds: the Phthirius, or Pediculus capitis; the Phthir., or Ped. corporis; and the Phthir., or Ped. pubis. As the affections produced by these insects differ somewhat they will be described separately.

PHTHIRIASIS CAPITIS.

Definition and description.—This affection is due to the lodgment and increase of the Phthirius capitis or head-louse, on the scalp, which part it alone invades, other portions of the body being exempt from its attacks. The presence of the insect gives rise to irritation and itching, and this to scratching. In some persons the insect is tolerated without much inconvenience, but in others—especially in children with an eczematous tendency—considerable reaction may result and manifest itself by vascular and pustular eruptions, accompanied with more or less exudation and the formation of crusts. In addition glandular enlargements in the post-cervical regions, and small abscesses may appear on this region and on the scalp. The hair is frequently matted together by the exudation, and in severe cases ,we meet with a mass of mingled hair-crusts and lice, constituting a fetid and disgusting collection of vitalized filth.

Etiology.—The principal etiological factor in this disease is shown in Fig. 23.

The appearance of this insect is familiar, I presume, to all, and need not be specially described.

Diagnosis.—The only questions that can arise are between a phthiriasis alone, a phthiriasis combined with eczema, and an eczema alone. The pathognomonic sign is, of course, the insect itself, which can generally be found without difficulty. If, however, the head has received a thorough combing, all, or most, of the insects may have been removed. The comb, however, will not remove the eggs, commonly called "nits," which remain attached to the hairs, being very firmly glued to the hair-shaft in the manner shown in Fig. 24.

The relationship between phthiriasis capitis and eczema seems to be this: In a person subject to eczema, phthiriasic invasion is likely to develop an eczema. In a person already suffering from eczema of the scalp, the phthirius capitis appears to increase and multiply more readily than in the scalp of one who is free from eruption. Eczema capitis without phthiriasis capitis is, of course, determined by the entire absence of the insect and of its ova.

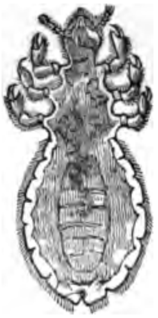

FIG. 23.—Phthirius capitis, or head-louse.

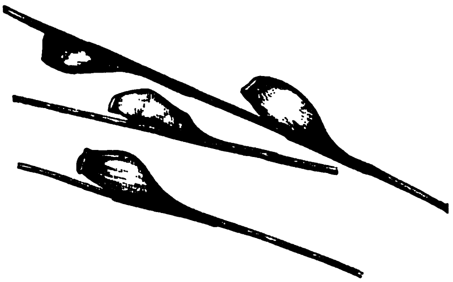

FIG. 24.—Eggs of the phthirius capitis. (ANDERSON.)

Prognosis.—Always good.

Treatment.—A very effectual method of curing the affection is to shave off all the hair. This it is often undesirable to do. Under these circumstances an antiparasitic ointment or lotion may be employed. Mercurial or sulphur ointments are effective, but perhaps the most popular application is the Tincture of *Delphinium Staphisagria.* Tobacco has been employed, but is dangerous. Crude petroleum, or its refined product, Kerosene, is a very eligible preparation, and the one most frequently employed by the author. It should be applied daily until the affection is at an end. Kerosene destroys the pediculus but does not appear to retard the hatching of the ova. The young, however, are destroyed as soon as hatched, and the affection is thus, in a short time, controlled. The empty egg-shells may remain attached to the hairs for a considerable time, thus deceiving one into the belief that the parasitic affection still exists. A coexisting eczema should be treated in accordance with the principles that underlie the treatment of that disease.

PHTHIRIASIS CORPORIS.

SYN.: Pedicularis corporis.

Definition and description.—This is a zoöparasitic affection, due to the invasion of the skin by the Phthirius or Pediculus corporis. It is characterized by pruritus, which leads to scratching and the development of certain secondary lesions which may be conveniently termed scratch-marks. These, in milder cases, may consist simply of little black points, slightly, if at all, elevated above the surface of the skin. They are produced by the desiccation of a small droplet of blood, resulting from the wounding of a few papillæ with the finger-nail; next we may find red lines or streaks, surmounted with blackish red ridges of dried blood. These minute incrustations are rarely absent, and, to a certain extent, are pathognomonic of the affection. As the insects increase in numbers, the irritation likewise increases, and the pruritus becomes intense, keeping the patient busy with his nails the greater part of the time. A superficial scratching, however, will not afford sufficient relief, and the unhappy sufferer tears the skin with his nails until he is a mass of bleeding excoriations. Under the influence of the continual irritation the skin darkens, and the body is covered with lines and blotches more or less deeply pigmented. When the disease is severe upon the lower extremities it is not unusual to find enlargement and tenderness of the inguinal glands. The affection is most frequently met with in advanced life.

Etiology.—The pediculus corporis having once effected a lodgment, makes its nest or habitation among the undergarments of the patient, and not beneath the skin like the acarus, nor upon the skin and among the hairs as do the other species of pediculus. It seeks by preference points where the clothes are thrown into folds, and there lays its eggs. When hungry it promenades the surface of the skin and seeks a convenient spot for a repast. This is effected by the insertion of a long *haustellum* through which it sucks up a sufficient quantity of blood. If undisturbed, it feeds most leisurely, and until its abdominal cavity is quite distended, and even then it will not always stop, but sometimes rejects, *per anum*, that which it has just taken, in order to make room for a fresh supply. It is the irritation produced by these insects that gives rise to the symptoms we have already considered.

Diagnosis.—The majority of cases of severe pruritus met with, at least in this city, are examples of Phthiriasis and no case of general pruritus should be passed without special examination as to its connection with vermin. The presence or absence of pediculi should be positively determined, and they usually can be without difficulty. . Search for the insect should not be made *on the skin*, as, unless very abundant, they will not be found there, but on the *undergarments*. Once found, the diagnosis is made. If after thorough and repeated examinations they are not found, the pruritus must be referred to some other cause. In Phthiriasis the regions that usually exhibit the most distinct evidences of scratching are the upper part of the chest, the thighs, legs, and back; the head, belly, and genital region being comparatively free. In advanced cases the patient's expression, gait, and behavior are so characteristic that the experienced observer will frequently make a correct diagnosis before a single lesion is brought to his eye.

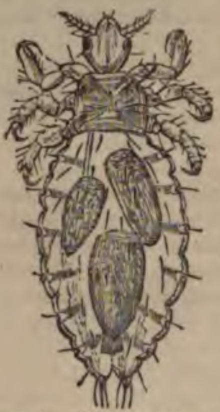

FIG. 25.—Phthirius or pediculus corporis, also called pediculus vestimentorum.

The form and appearance of the insect are shown in Fig. 25.

Prognosis.—This affection is always curable, provided the patient is in circumstances that will permit proper measures of relief to be carried out. The great majority of cases met with here is in hospitals and at dispensaries, that is among the pauper class, and if cured they are very apt to recontract the trouble, and thus suffer from it to a greater or less extent for years. In the upper classes it is sometimes though rarely met with, and under these circumstances is readily relieved.

Treatment.—A warm bath, thorough soaping, and a good scrubbing will free the body of the patient from the parasite. The clothes and bed-clothes, however, must be disinfected by baking, prolonged boiling, or sulphur fumigation. If practicable they had better be destroyed. A certain amount of pruritus will remain for some time after the destruction of the insect. This may be alleviated by applications of tincture of Delphinium, of Stramonium and other antipruritics.

PHTHIRIASIS PUBIS.

SYN. : Pediculosis pubis—*Anglice*, "Crabs."

Definition, description, and etiology.—This affection is due to the Phthirius or Pediculus pubis, the general form and appearance of which is shown in Fig. 26.

This insect exhibits a preference for the pubic region. It is not, however, confined to this locality, as we have found it in the eyebrows, beard, and axilla, as well as the hairy parts of the chest, thighs, and legs. It is, I believe, never met with on the scalp. The insect derives its nourishment from the skin, to which it is usually found strongly attached. It lays its eggs, however, among the hair, to which it firmly glues them.

The affection is most frequently contracted during sexual intercourse, but sometimes by wearing infected clothing, sleeping with an infected person, or in a bed where one has slept, and probably also at the water-closet.

The presence of the insect gives rise to more or less pruritus of the affected regions, and commonly leads to inspection of the parts and detection of the cause.

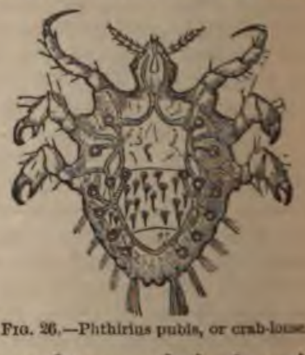

FIG. 26.—Phthirius pubis, or crab-louse.

Diagnosis.—Pruritus of the hairy parts of the body, other than the scalp, should always raise suspicion as to the presence of the insect, and a careful examination will settle this question without difficulty.

Prognosis.—The patient may, if he chooses, be freed from his ailment in half an hour, or if he prefers less efficient treatment, may fuss with it for months.

Treatment.—If the eyebrows are involved, carefully pull out or snip off every hair to which the eggs of the insect are attached. Then thickly smear the part with mercurial ointment. The whiskers, beard, and moustache, if those parts are involved, may be treated in the same manner. The pubic region and other hairy parts should then be carefully examined, and the affected regions should be shaved with a razor. If a warm bath, with soap and a scrubbing-brush, be then employed, the probability is that no further treatment will be necessary. The less efficient means of cure are the employment of *Ungt. Sulphuris*, *Ungt. Hydrargyri*, etc., or lotions of bichloride, tincture of delphine, petroleum, kerosene, and the like.

PITYRIASIS.

Syn.: Pityriasis alba; Pityriasis simplex.

Definition and description.—This affection is characterized by the development of circumscribed or diffuse scaly patches, situated upon a non- or very slightly infiltrated surface, and very slightly, if at all, reddened. The scales are firm and not imbricated like those of Psoriasis, and are not, as a rule, very adherent, being easily removed by the slightest friction, but quickly replaced by the development of a fresh supply. The surface is dry and continually desquamating. The patches vary in size, and are usually circular or oval, and may appear on any part of the surface, though the affection is most frequent upon the scalp, face, and upper part of the body, and but occasionally met with lower down. It may be either acute or subacute, the former variety being most frequent in children, though sometimes occurring in adults. In this form the infiltration is more pronounced, and the color more heightened, while the tendency to epithelial proliferation is not so great. It may last a few weeks or a month or two, and then gradually return to a healthy condition; but after the scaling subsides, and the slight infiltration undergoes resolution, a little staining, most marked on patches occurring on the lower extremities, may be perceived for a short time longer.

The subacute form is characterized by less redness and infiltration than the other, but is accompanied with more abundant and decided scale formation. When it occurs on the hairy parts, as the scalp and the beard, etc., it constitutes one of the varieties of "dandruff," and its appearance is sometimes modified by the mingling of more or less sebum with the epidermic cells, due to increased functional activity of the sebaceous glands. At other times the sebaceous secretion is less than normal, and the white powdery scales may be almost blown off from a scalp that is even preternaturally dry. This subacute form is usually chronic, and its duration is indefinite, often lasting for months, and even years. In these cases, when occurring on the scalp, it becomes, if unchecked, an exciting cause of premature alopecia. This, however, rarely occurs until after the affection has been years in existence.

Pruritus is usually present to a slight degree, rarely interfering seriously with the comfort of the patient.

Diagnosis.—As a rule, little trouble need be experienced in the diagnosis of ordinary pityriasis. Typical cases can be recognized at once, but in this, as well as in many other affections, typical cases are not the only ones met with, and hence difficulties may arise. The only affections liable to be confounded with it are cases of dry and scaly eczema in the third stages, and cases of psoriasis, in which the scaly element is not very marked. In fact there are transition forms that, judging by appearance alone, would sometimes leave us in doubt as to which name could, with the most propriety, be assigned to the case in question. Under these circumstances the history of the eruption should be taken into account. In the majority of these doubtful cases, however, it matters very little which name is given, as the treatment would be essentially the same, whether we regarded the disease as an eczema or a pityriasis. The affection could hardly be mistaken for the one known of late years by the distinctive title of *Pityriasis rubra,* which is a distinct disease by itself, not apparently related in any way to ordinary Pityriasis.

Prognosis.—The prognosis in the acute forms is good, in the subacute and chronic the ultimate prognosis is good, but it often requires some months to bring them into subjection.

Etiology.—Pityriasis belongs to the group of affections depending on the arthritic, dartrous, or, as I prefer to term it, the Rheumic diathesis. In other words, it is merely the local manifestation of a constitutional predisposition. The special causes which lead to the development of the eruption are unknown.

Treatment.—In undertaking the treatment of pityriasis, the diathesis must, of course, be taken into consideration. The principles that underlie the management of this have already been fully discussed. The general hygiene of the patient, if faulty, should be corrected, and the constitutional treatment regulated by the necessities of each particular case. Oil and iron in the debilitated; quinine and nux vomica in those accompanied with neurotic phenomena; colchicum and the benzoates in the rheumatic; mercury, podophyllum, iris versicolor, or euonymus in the bilious, etc. The drugs which have appeared to me to specially influence the eruption are Arsenic, Antimony, and Sulphur. The *local* treatment of pityriasis usually involves the employment of stimulating alkaline applications, followed by those containing mercury and tar. The alkaline preparations most in use are green soap, soap-spirit, borax, and ammonia. In acute cases these are used for a shorter and in subacute ones for a longer period; a single thorough green-soaping being all that is advisable in some cases, while others will be benefited by repeated applications. As soon as the parts assume a dry, tense, and glistening appearance, the alkaline applications should be discontinued, and if further stimulation seems desirable an ointment containing a little tar may be employed. If less stimulation is needed, an ointment of calomel or ammoniated mercury is preferable; later, simple emollients. I have also used to advantage the oleate of mercury, the oleate of strychnia, and the essential oils of rosemary and of sage, diluted with alcohol or castor-oil.

Besides the drugs mentioned, the following may be considered: *Acidum Sulphurosum*, 11; *Dulcamara*, 51; *Glycerine*, 56; *Hydrarg. Chlor. Corros.*, 64; *Hyd. Iod. Vir.*, 65; *Hyd. Oxid-Rub.*, 67; *Lapsana*, 73; *Mais Guasto*, 75; *Potas. Carb.*, 92; *Rhus Tox.*, 99; *Scabiosa*, 104; and *Trifolium Pratense*, 112.

PITYRIASIS RUBRA.

Definition and description.—This form of disease, first accurately described by **Hebra**, is characterized by an intense redness, diffused over a large part of the skin, or even the whole of it, disappearing beneath the pressure of the finger, and accompanied by the presence of fine, white, loosely adherent scales, which result from the constant shedding of the superficial layers of the cuticle. The affection is attended with but slight pruritus. Its duration is chronic and recovery is doubtful, the cases treated by **Hebra** having all terminated fatally after a few years. The disease is rare in America.

Diagnosis.—The only affections for which it could possibly be mistaken are Eczema or Psoriasis, from both of which the history should be sufficient to enable it to be distinguished.

Ætiology.—Unknown.

Prognosis.—Bad.

Treatment.—On this point **Hebra** says: "In the cases of *Pityriasis rubra* universalis which have come under my observation, I have made trial of many of the medicines and plans of treatment, which I have described in detail when speaking of *Psoriasis*, but unfortunately I cannot report that I have obtained the same good results as in that complaint. Internal remedies, in particular, have always failed to produce any change in the character of *Pityriasis rubra*, not even relieving it in the slightest degree. Neither arsenic, tincture of cantharides, sulphur, antimony, decoctum lignorum, sarsaparilla, iodine, nor mercury, has succeeded in putting a stop to the disease.

"On the other hand, it has, to a certain extent, been modified by the repeated employment of tepid baths (in which I have kept the patient for several hours at a time), and by the application of oils and emollient ointments. Even then, however, the effect of the treatment has merely been to render the masses of epidermis more transparent, and the skin itself more supple" (**97**, Syd. Ed. 2: 73).

Hans Hebra reports (**175**, 3: 516) the treatment employed by him in a case of this disease. The duration of treatment was three years, at the end of which time the patient died, having taken in the interval 4,000 Asiatic pills, each containing $\frac{1}{16}$ of a grain of Arsenic. Comment is unnecessary.

PRURIGO.

Definition and description.—Prurigo is a name that has been used in a variety of significations, chiefly to denote a condition of itching or pruritus, arising from a number of causes—in other words, as the name of a symptom rather than of a disease. We here confine it, however, in accordance with present dermatological usage, to a special disease first clearly defined by **Hebra**. The disease is quite rare in this country, and the following description is taken from the author just named:

The affection in all cases commences by the appearance of small subepidermic papules, more easily appreciable by touch than by sight, since they rise but little above the level of the skin, and do not differ from it in color. They are always isolated. They give rise to a good deal of irritation, and in consequence of scratching become a little more elevated and of a redder color. Repeated scratching destroys their epidermic covering and permits the discharge of a transparent or yellowish serum, or if the papillæ be wounded the escape of a droplet of blood which forms a minute blackish crust upon the summit of the papule. As the papules exist in considerable number, this process, repeated in them all, produces the aspect to which the name of ordinary prurigo may be given.

When, however, the affection has lasted some time, new phenomena are added to those already mentioned. Pigmentation of skin, gradually increasing, and corresponding to the location of the scratch-marks, becomes a prominent feature. The natural lines and furrows of the skin become more widely separated, and more distinct than in the normal condition, specially noticeable about the backs of the hands and wrists. The downy hairs are torn out by scratching, or broken off and disorganized, and the skin itself is harder and thicker than in health.

In severer cases all of these symptoms become exaggerated. The papules are larger, the itching more intense, the excoriations more severe, and the number of blackish blood-crusts increased. In addition we notice a more general brownish pigmentation, and a detachment of the outer layers of the epidermis under the form of a whitish branny desquamation. In some cases a vesicular or pustular eczema may be developed, masking, to a certain extent, the peculiar features of the primary affection.

The disease is exceedingly chronic, and in Hebra's experience persists throughout the whole lifetime of the patient. It does not, however, appear to exert any noxious influence on the general health, or to shorten the life of the unhappy sufferer.

Diagnosis.—Many of the features of prurigo are common to it, and the various forms of pruritus, as, for instance, the itching, the scratch-marks, and the pigmentation of the surface. On the other hand, the peculiar papules are pathognomonic, and are sufficient, in connection with the other symptoms, to enable the nature of the affection to be promptly recognized.

Prognosis.—Although recently some cures of Prurigo have been announced, the prognosis, on the whole, is exceedingly bad.

Treatment.—HEBRA found the disease incurable ; he nevertheless was able to obtain great amelioration of the condition of the skin by judicious and persistent treatment. Internal medication was useless, but local measures, calculated to soften and hasten the desquamation of the external layers of the skin, were of decided service. Baths of all sorts, warm, cold, or vapor, were of the first importance. In addition, thorough applications of green soap were frequently employed. Sulphur, whether used in baths, ointments, or soap, was found very useful, as was also Vlemingkx's Solution. The various preparations of tar were found to possess a marked influence in diminishing the irritation.

Quite recently the internal administration of Jaborandi has been found very beneficial at the hands of Simon.

The following drugs may also be considered: ***Acidum Carbolicum***, 6; ***Acid. Hydrocyanicum***, 8; ***Acid. Pyrogallicum***, 10; ***Acid. Sulphuric.***, 11; ***Colchicum***, 46; ***Creosotum***, 48; ***Ergota***, 52; ***Hydrarg. Chlor. Corros.***, 64; ***Hydrarg. Nitras***, 66; ***Laurocerasus***, 73; ***Ol. Morrhuæ***, 78; ***Petroleum***, 83; ***Ribes rubrum***, 101.

In reference to the foregoing it may be stated, that although recommended for "prurigo," other pruriginous affections, and not the disease here described, were doubtless, in many instances, included.

PSORIASIS.

SYN.: Lepra vulgaris; Lepra Græcorum; Alphos.

Definition and description.—Psoriasis is a constitutional disease, characterized by the appearance on the skin of scaly patches of varying size. The scales are silvery white, thick and imbricated, and rest upon a thickened and infiltrated base of deep red color. The deeper scales are firmly attached, and on forcible removal expose little bleeding points. The patches vary in size, in configuration, and in locality, and on these peculiarities a number of varieties have been based by different authors. At the very commencement minute, slightly raised points become visible. These are soon covered with scales, and the affection, in this stage and condition, may be termed Psoriasis *punctata.* These increase in size, and may resemble a drop of wax or of mortar, and then constitute P. *guttata.* If they increase until they have attained the size of a coin the name P. *nummulata* is applied. If several of them coalesce so as to cover an extended surface the term P. *diffusa* is employed. If the spots heal in the centre, leaving a ring, the name P. *annularis* may be used. Some English writers apply the term Lepra, or *lepra vulgaris,* to this form. If a large patch, formed by the confluence of several smaller ones, heals everywhere except at the borders, these latter may have a gyrate or sinuous outline, and the name P. *gyrata* is given. Lastly the expression P. *universalis* indicates that the greater part of the surface has been invaded. It will be readily perceived that these several so-called varieties are not such in reality, but simply indicate different stages, etc., of the disease.

Psoriasis may occur anywhere on the surface from the scalp to the sole of the foot, but its favorite seats or points of election are the elbows and knees. The disease is not contagious.

Whether scantily developed or extensive, Psoriasis is essentially chronic, and when unrelieved by treatment often lasts for months and sometimes for years; and even when caused to disappear it is ever ready to return on the slightest or even without any apparent provocation. It is usually worse in winter than in summer, and may disappear spontaneously during the hot months, to return again when the cold weather sets in. This tendency to relapse is one of the most prominent and striking features of the disease. The lesions in typical cases are always dry, never exhibiting vesicles or pustules, and never exuding moisture or forming crusts. The superficial scales are less adherent than the deeper ones, and may be removed by the slightest friction. They are, however, quickly renewed, and in a few days are as thick as before removal. In extensive cases the amount of desquamation may be very great, reaching even to a teacupful of scales in twenty-four hours. After this condition has lasted for an indefinite period, retrogressive changes may occur spontaneously, or as the result of treatment. In either case the desquamation lessens, the infiltration diminishes, and the color fades out without leaving scar or mark to indicate the site of the previous eruption. In some cases recovery commences at the centre of a patch, and gradually progresses outward to the margins, which are the last to disappear. Pruritus of moderate severity not unfrequently accompanies the eruption. Sometimes this symptom is absent.

Diagnosis.—In the vast majority of cases no difficulty will arise in connection with the recognition of this affection. Occasionally, if limited in extent and situated on parts that are naturally moist, as about the genitals, Psoriasis may exhibit a close resemblance to Eczema. As a rule, however, patches will be found on other parts and exhibit typical features, thus enabling a diagnosis to be made. The only serious difficulty that is apt to arise is in distinguishing between Psoriasis and a scaly Syphilide. The previous history will sometimes settle the matter in case of doubt, while at other times thorough analytical examination of the lesion will be requisite. If on inquiry it is ascertained that the present eruption is the first distinctly scaly one that the patient has had, but that within a year or two he has had several other eruptions of differing character, the presumption is in favor of Syphilis. If, on the other hand, the patient states that he has had a similar scaling on previous occasions, and for a number of years, the diagnosis of Psoriasis is almost certain.

As regards the lesion it may be stated that, as a rule, the infiltration is not as great in squamous Syphilides as in Psoriasis, the scales too, are larger but not heaped up, nor are there so many of them in the former as in the latter disease. Further, the scales usually entirely cover the infiltrated base in Psoriasis, while a little reddish ring or margin generally surrounds the scales in Syphilis. These features, together with such history as can be got, will usually enable a correct diagnosis to be made.

Ætiology.—Psoriasis pertains to the Rheumic diathesis, and the *fons et origo*, and the predisposing causes of the affection must be there sought. The exciting causes are obscure. A great number have been mentioned by authors, but hardly one of them will be found to hold good except in a limited number of cases. It may be noticed, however, that the eruption sometimes appears on women during the periods of gestation and lactation, though absent in the same patients at other times.

Prognosis.—Though never of itself fatal, nor, so far as I know, provocative of other serious disease, the prognosis as regards a permanent cure is decidedly unfavorable, in consequence of its unrelenting tendency to relapse. HEBRA, in fact, states that it is incurable, and perhaps it is when treated by the Vienna method. My own experience, however, and that of other American, English, and French dermatologists, is more favorable, and it may be stated that, in a certain proportion of cases, patients will, after a prolonged and judicious treatment and proper care on their own part, go for many years, if not for life, without a return of the disease.

Treatment.—Psoriasis is an affection that will certainly try the patience of the sufferer and the skill of the physician, more thoroughly than any other among the commoner diseases of the skin. As WILSON truly says, it "is not a disease on which to build a medical reputation."

Before detailing the methods that I personally find it most desirable to adopt in the treatment of this disease in private practice, I shall give those which are recommended by the two most noted dermatologists of the quarter century just past—namely, WILSON, of London, and HEBRA, of Vienna.*

I do this the more readily as the principles underlying the methods of these eminent men are in sharp contrast, the true method I believe lying between them. I shall commence with WILSON and slightly condense the statements made in his work (77, 310 *et seq.*). He makes the preliminary statement that Psoriasis may be complicated with other affections, which must be carefully considered before deciding on the treatment. One of the most common complications is that form of mal-assimilation which gives rise to the gouty and rheumatic diathesis, and this is apt to occasion an inflamed and painful state of the eruption, and must be removed before the real treatment of Psoriasis* is begun. Not unfrequently, in the presence of the gouty diathesis, the eruption is attacked with a violent erythema, and not uncommonly it throws out the ichorous exudation of eczema. He then goes on to say: "The treatment of lepra therefore presents two indications: *firstly*, the removal of complications, together with the regulation of the assimilative organs; *secondly*, the adoption of a course of specific remedies.

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* At the moment of writing Hebra has been dead a few months, but his works will live for many decades.

"The complications of lepra call for the same treatment that they would receive independently of their connection with lepra," consisting mainly in the use "of gentle aperients, salines, bitters with alkalies, bitters with the mineral acids, colchicum, etc. Occasionally the effects of this treatment are very remarkable. . "With the improvement of the general health, the lepra is always improved and sometimes will get entirely well without specific remedies. The practitioner must not, however, in this event, rush to the conclusion that the remedies have cured the lepra, and will therefore cure it again. If he endeavor to put such an idea to the test of experiment he will inevitably fail. The lepra, in his fortunate case, had reached its turning-point; it was no longer kept up by its special cause, and was only prevented from healing spontaneously, as it not uncommonly does, by the constitutional disturbance then existing. . . .

"As a specific in lepra, there is but one reliable remedy, and that remedy is arsenic. . . . Arsenic will cure lepra with certainty, but neither arsenic nor any other known medicine will prevent it from returning again; sometimes after a thorough dispersion by arsenic, the eruption never returns, but more frequently it recurs the following year, or after the lapse of several years.

"The pharmacopœia is rich in arsenical preparations, but none exceeds the liquor potassæ arsenitis, the solution of Fowler. The dose of this preparation is *five* minims, to be taken with meals three times a day. I frequently combine with it five minims of antimonial wine, and ten minims of tincture of ginger, making the dose of the mixture twenty drops. . . . .

"In very chronic cases of lepra, it may be found advantageous to combine mercury, and sometimes mercury and iodine with the arsenic. . . .

"Liquor potassæ and dilute nitric acid are among the remedies for lepra. The former may be taken in doses of from one to two drachms,† two or three hours after a meal, three times a day, in any convenient vehicle, such as milk or beer, or in some medicinal infusion, and is not incompatible with the arsenical treatment. The dilute nitric acid is incompatible with the arsenical treatment, and may be adopted in those cases wherein the stomach evinces a great repugnance to arsenic. The dose is one or two drachms‡ in barley-water, sweetened with sugar, to be taken an hour before meals, twice or three times a day. I have usually combined this treatment with a Plummer's pill at bedtime. . . . . .

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* Called *Lepra* by Wilson.

† The Liq. Potassæ of the British Pharmacopœia is weaker than that of the United States, the spec. grav. of the former being 1,058, that of the latter being 1,065. The dose should consequently be smaller.

‡ This seems to be a very large dose.

"Local treatment for the cure of lepra is useless; but various indications present themselves which render local treatment for the relief of irritation of the skin advantageous and necessary. An erythematous or eczematous state of the eruption, or a cracked and fissured state of the skin, will call for the use of the oxide of zinc ointment, with spirits of wine or glycerine. Where the scales cover a large extent of the surface of the body, a tepid soap-bath or vapor-bath is indicated, and is a source of much comfort. Various remedies are found to give relief by occasioning exfoliation of the scales, such as a lotion of the bichloride of mercury; an ointment of carbonate of potash, of iodide of potassium, the white precipitate, the concrete naphthalin ointment (ʒ i.— ℥ i.), or tar ointment. For a dry and parched state of the eruption, the best application is a lotion of equal parts of distilled glycerine and rose-water.

"For the accumulation of sordes and scales which takes place in lepra capitis, the best application is the unguentum hydrargyri ammonio-chloridi; and for the dry, horny, ragged, and loosened nails of lepra unguium, steeping them in glycerine.

"But I must repeat, the local treatment of lepra is not to be regarded as curative, it is simply palliative; the cure must come from within, from that improved and altered state of the blood which results from the proper administration of arsenic."

The views of HEBRA, on the treatment of Psoriasis and of skin diseases generally, are, in the main, diametrically opposite to those of WILSON. It is but right, therefore, that they should receive a fair exposition, and this can best be done by giving them at length and in his own words. The quotation will be a long one, but I believe every reader will feel himself amply repaid for the time spent in its perusal.

Hebra says:

"For the cure of psoriasis, and indeed of chronic diseases of the skin generally, two methods have from early times been proposed. The first of these started from the supposition that all the chronic dermatoses are the children of one parent, the products of one and the same dyscrasia or morbid change in the blood; and, therefore, that these diseases are to be cured by purifying and correcting the state of the circulating fluid, or by expelling acrid matters (acrimoniæ sanguinis). For the practice of this mode of treatment, no accurate diagnosis was required. It came to much the same thing whether the patient was suffering from psoriasis, prurigo, or ecthyma. In each case the same remedies were employed, namely, the so-called hæmato-cathartica.

"By some physicians, then, this was regarded as the only legitimate method of dealing with such diseases. They would not hear of any other plan of treatment, and condemned as dangerous all local applications, on the ground that such applications might "*drive inward*" the cutaneous affection, causing it to "*recede*" from the skin and undergo "*metastasis*" to some important internal organ. And even those more intelligent and experienced practitioners who did not entirely oppose the use of local treatment nevertheless considered it to be admissible only when the fluids of the body had been thoroughly purified, and freed by a course of medicine of some kind or other from the acrid matters of the eruption (von den Schärfen der Flechte). The history of past centuries shows sufficiently how far this notion could be carried, although it rested on an utterly speculative basis.

"The unsatisfactory results yielded by this plan led physicians to enter upon an entirely different path, that of experiment and observation. Now this path is, I must confess, the one which I myself follow exclusively in the treatment of cutaneous affections, and, indeed, of disease in general. I set not the slightest value on any remedies except those which (after repeated trials, and when I am accurately acquainted with the complaint) I find to produce a favorable change in its course, or, in other words, to cure the patient. I never attribute therapeutical powers to a medicine unless I observe its employment to be invariably and constantly followed by some change in the morbid products, and by the termination of the disease in a shorter time than when it is allowed to undergo spontaneous involution. I do not care in the least whether this result is obtained by introducing the remedy into the patient's alimentary canal or by bringing it into contact with his skin.

"In the previous volume, I have drawn attention to the fact that the skin, as well as the intestinal canal, has the power of absorbing medicinal substances, as well as contagia and other noxious agents, and that remedies applied to the exterior of the body reach the blood, like those which are swallowed. In reference to this, I need but point to the well-known fact that a short time after their application to the cutaneous surface, preparations of mercury or iron, and even tar, appear in most of the secretions and excretions, and can be plainly detected in them by chemical reagents. And not only is the skin well adapted to absorb medicinal substances, but their external application, when the skin is diseased, has the advantage of bringing them into direct contact with the part affected; a very great gain indeed, when it is desirable to dissolve, soften, or macerate the morbid products, or to modify them in any other way. A further advantage of introducing remedies through the skin is, that the whole intestinal tract is left undisturbed, so that the disorder of the nutritive functions is avoided to which medicines often give rise, and that proper nourishment can be taken by the patient at the same time that he is undergoing the treatment from which a cure of his disease is looked for.

"It must not, however, be inferred, from the remarks I have been making, that I am entirely opposed to the administration of internal remedies, and would in no case have them employed. On the contrary, I never hesitate to prescribe such medicines in all cases in which their success has established their value. I object merely to those inert, obsolete drugs, the belief in the curative powers of which has been transmitted from teacher to pupil without inquiry, and from text-book to text-book without examination or criticism, and which are prescribed in practice without thought and as a matter of routine. Unfortunately, too, these medicines are not always entirely negative in their action, as are, perhaps, the homœopathic medicines; so that we cannot but regret, instead of smiling at, their administration.

"Of the drugs which I have been condemning in the preceding sentences, I think it well to mention expressly those which are most commonly employed, and many of which I have myself repeatedly tried. Such are the following:—The *Stipites Dulcamaræ*, *Millefolium*, *Trifolium fibrinum*, *Fumaria*, *Inula helenium*, *Ulmus campestris*, *Flores Pedemontanæ*, *Viola tricolor*, *Radix et Baccæ Juniperi*, *Juniperus sabina*, *Rhus radicans*, *Rhus toxicodendron* (Dufresnoy), *Eupatorium cannabinum et perfoliatum* (Barton), *Conium maculatum* (Valentin), *Pulvis foliorum Belladonnæ* (Theden, Schack), *Pulsatilla nigricans* (August Gottlieb Richter), *Solanum nigrum* (Alibert), *Herba Scabiosæ arvensis*, *Daphne mezereum* (Loiseleure and Delongchamp), *Orobanche virginiana*, *Saponaria*, *Radix Phyllidis amaræ*, *Decoctum Carbonum* (Busch), *Infusum Sassafras*

(Sachse), *Ledum palustre* (Schöpf), *Succus Nicotianæ, Folia et putamina Nucum juglandum, Sarsaparilla, Bardana, Guaiacum*, and the *Species lignorum*.

"Some of these different substances, or the infusions, decoctions, or extracts made from them, were, as is well known, formerly used by medical men in all parts of the world in the treatment of every obstinate chronic cutaneous affection. And yet, although they were so generally employed, they had not even the *reputation* of being *remedies* (in the proper sense of the term); and, to use the mildest expression, I must say that their influence on diseases of the skin is entirely imaginary.

"If these drugs failed, it was in former times the practice to have recourse to other medicines supposed to be more powerful. Such were the "*crude Antimony*," or *Antimonii tersulphuretum ; Æthiops antimonialis ; Manganum nigrum*, or *Binoxide of Manganese ; Graphites elutriatus*, or *prepared Black Lead* (Weinhold) ; *Baryta muriatica*, or *Chloride of Barium ; Calx Antimonii sulphurata*, or *Sulphuret of Antimony and Calcium* (Hufeland) ; *Sulphuretum Kalii et Sodæ* (Chaussier) ; *Tartarized Antimony* (Fagès) ; *Golden Sulphuret of Antimony*, or *Antimonii pentasulphuretum* (Vogel) ; *Æthiops Mineral*, or *Black Sulphuret of Mercury* (Dzondi, Kopp) ; *Mercurius præcipitatus ruber*, or *Nitrico-oxide of Mercury ; Mercurius acetatus*, or *Acetate of Mercury* (Hufeland) ; *Turpethum minerale*, or *Yellow subsulphate of Mercury* (Alibert) ; *Nitrate of Mercury* (Godard) ; *Chloride of Sodium and Gold* (Eberle, Rayer) ; *Liquor Cupri ammoniato-muriaticus* (Köchlin) ; *Chlorate of Potass* (Chisholm) ; *Alumen ex decocto Sarsaparillæ* (Hufeland); the preparations of *Iron* (Rayer), and *Anthracokali* (Polya).

"Again, the different acids, mineral and vegetable, have been prescribed internally in this disease: hydrochloric acid by Jugler and Evers; sulphuric acid by Home; nitric acid by Chisholm and by Jos. Frank; malic acid by Gmelin; lemon-juice by Schindler and Rodschied; vinegar by Jos. Frank; hydrocyanic acid diluted with alcohol by Schneider.

"Other substances which have been vaunted as remedies at least differ widely from one another. Thus, Willan recommended Liq. Potassæ, Galen the flesh of vipers, Härnius cucumbers, Marcellus a plant called Britannica, etc., etc.

"Another medicine, sent direct from Brazil, is the Hura Braziliensis, a plant belonging to the Euphorbiaceæ, which is said to have been used in that country with success in syphilis, as well as in forms of leprosy, among which psoriasis was wrongly included. I have prescribed it to about twelve patients affected with psoriasis, and to as many suffering from syphilis. In these cases I used sometimes a decoction made from the dried bark (℥j. to ℥vj.), sometimes certain preparations derived from it in the recent state. One of these preparations, which is known as Assacou (succus recens Huræ Braziliensis) is given in doses of ten grains, either alone or with the decoction. Another preparation of this drug is termed the succus Huræ alcoholicus, of which there are two forms, that known as No. 1 being a mixture of the fresh juice with an equal quantity of alcohol, while that which is termed No. 2 contains only one part of the juice to ten of alcohol. The former is given in the dose of half a drachm, the latter in that of a drachm, daily.

"This drug, whether in the form of decoction or extract, produces very violent effects; in some patients vomiting alone, in others both vomiting and severe purging. Thus, as many as twenty evacuations (in both directions), have followed the administration of the concentrated decoction with the Assacou. Hence, American physicians recommend that the decoction should be given only every fourth day, and keep the patient in bed and on low diet. Now, when the drug is prescribed in this way and continued for some time, the nutrition of the patient suffers to so great a degree, that the psoriasis disappears, just as when the nutrition is violently disturbed from any other cause. But yet the power of curing this disease cannot be said to be possessed by the Hura Braziliensis; for in every case in which a psoriasis has subsided while this medicine was being taken, the affection has always returned when the patient has recovered from the ill effects produced by it. In fairness, however, it must be added that I have never seen any permanent harm done by the drug, even when it was continued for as long as three months. All the patients to whom I administered it recovered very quickly from the injurious effects to which it had given rise.

"Another mode of treatment, analogous to that last mentioned, and adopted, not only by many of the older practitioners, but even by those of a more modern school, is that of giving purgatives Among the remedies of this kind are, for instance, the simple neutral salts (such as sulphate of soda, sulphate of magnesia, phosphate of soda, etc.), the mineral waters of Saidschütz, Pillnau, Carlsbad, Marienbad, Kissingen, and other saline springs, and certain vegetable cathartics (including jalap, aloes, colocynth, gamboge, colchicum, and croton-oil). Lastly, calomel has been greatly extolled, especially by English and French writers; among the former by Willis, among the latter by Biett and Rayer. Among these drugs, there are many which I have myself in the course of time repeatedly prescribed; and I have besides seen several patients suffering from this obstinate disease, to whom they have been given during lengthened periods, and even for years, by different medical men practising in this or in other countries. But, unfortunately, the good effects which have been ascribed to cathartics in the treatment of psoriasis have not occurred in my experience. Now and again, the patches may have diminished under a long-continued course of drastic purgatives; but this could always be attributed either to a spontaneous involution of the disease, or to the fact already mentioned that all modes of treatment by which the nutrition is lowered do, for the time during which they are continued, bring about a diminution or even a complete disappearance of this eruption.

"Now, it is not possible for a man to go on taking purgatives all his life through without undermining his health. Moreover, when the patches of psoriasis have disappeared, the patient no longer sees the necessity of persisting in the treatment. Hence, in all these cases there comes at last a time when the purgatives are discontinued, and then the eruption always sooner or later returns. It follows, therefore, that these remedies cannot effect a radical cure of the disease.

"Yet another method of treating psoriasis consists in the administration of diuretics, such as the salts of tartaric acid, squill, Herba Equiseti, Radix Bardanæ, Baccæ Juniperi, Ononis spinosa, Petroselinum Apium, Rhamnus cathartica, Folia Uvæ Ursi, Digitalis, Aconite, Galium aparine, and the tincture of Cantharides. Of these substances, those first mentioned, which act mildly upon the kidneys, are altogether inert in cases of this disease; but the last of them must be admitted to be noxious, if not indeed to the psoriasis, at least to the patient affected with it. In every case in which I have prescribed the Tinctura Lyttæ (beginning, as is directed, with four drops, and increasing the dose to thirty drops daily), severe effects have been produced. As soon as the quantity given has amounted to fifteen drops, the patient has suffered from difficulty of micturition, and the urine has acquired a very dark color, containing albumen and afterward blood. In fact, the presence of these substances in the urine may be said to be a constant effect of this drug. Rayer, indeed, and the translator of his work into German, state that they have in several cases of psoriasis given the Tinctura Lyttæ in doses of 50 drops, and once in the dose of 150 drops, with the result of curing the disease without injury to the patient. But if the reports of these cases be consulted, it will be found that the treatment included sulphur-baths; and, in my opinion, there is no difficulty in deciding whether it was the tincture of cantharides or these baths which contributed most largely to the removal of the psoriasis. At any rate, I have never succeeded in removing the eruption by means of this drug; whereas I have often seen it lead to albuminuria or hæmaturia, although I have given it with all caution and in comparatively small doses. But I have known many instances in which sulphur-baths alone, especially those made with the Calx sulphurata or Hepar sulphuris calcareum (Kalkschwefelleber), have cured psoriasis, in so far as this disease can ever be said to be *cured*.

"Corrosive sublimate, again, and the blue ointment have been recommended in the treatment of psoriasis by experienced observers; but I have repeatedly found them to be inert. In proof of this statement, I may refer especially to cases in which syphilitic eruptions have been combined with the affection in question; as, for instance, when a syphilitic ulceration (Helcosis syphilitica) has presented itself in a patient who had for years suffered from a non-syphilitic psoriasis. Under such circumstances, the former disease has been entirely removed by a mercurial treatment, while the latter has remained unaltered.

"Equally powerless against psoriasis are iodine and all its preparations. I have seen not a few cases in which other practitioners had continued to give iodine for years without the slightest benefit.

"Unfortunately, too, I must say the same of cod-liver oil administered internally. As is well known, this remedy has, by many medical men, and with great justice, been recommended in various cutaneous affections, particularly lupus. But in psoriasis it is altogether valueless.

"Arsenious acid, on the other hand, has been known, from remote times, to possess the power of modifying the horny tissues in man, as well as in the lower animals. Everybody is acquainted with the fact that it is given to horses with the object of making the coat sleek and glossy, and that it at the same time improves their nutrition and mettle, so that horse-dealers employ it to increase the beauty of these animals. Most probably it was this circumstance which suggested the idea of using arsenic in the treatment of cutaneous affections. Its efficacy in certain cases in which the epidermis is diseased is undeniable, so that it has been believed by some to be a proper and sure remedy in all the scaly forms of eruption. It has been extolled by writers of every country, and there are very few books or papers upon any chronic dermatosis in which arsenic is not mentioned in laudatory terms. This is, above all, the case in the works of Biett (edited by Cazenave and Schedel), Devergie, Hardy, Erasmus Wilson, Thomson, and Hunt. The last-mentioned writer, in fact, makes arsenic play so very important a part in the treatment of cutaneous affections, that I cannot but draw the attention of my readers to his statements—not, indeed, because I wish them to imitate his practice, but because I am anxious to show how dangerous it is, and to prevent his directions being followed by others who have not had so large an experience as myself in this department of medicine. I feel it to be all the more necessary for me to give this warning, because I know that some most distinguished and scientific men have been misled by Mr. Hunt's work, which is generally referred to upon the subject, and which in 1860 was translated into German by Dr. E. R. Pfaff, of Plauen in Voigtland. Instead, however, of entering on a detailed criticism of this book, I will simply cite from it one passage to show the standpoint taken by the author. 'The disease,' he says on p. 16, 'will either get well spontaneously or not: if syphilitic, it must be treated accordingly; if otherwise, arsenic is the best alterative remedy.' I quote this as a specimen of the principles which guide Mr. Hunt, and of the summary method of procedure which he adopts in cases of cutaneous disease; but I must also mention that, besides giving the arsenic, he bleeds his patient several times *usque ad deliquium*, or has him cupped, and that he applies leeches to the red margins of those patches which have most recently made their appearance, and prescribes strong saline purgatives, or blue-pill, Hydr. c. Cretâ, colchicum, and colocynth. And yet he is obliged to confess that, in spite of this treatment, relapses took place repeatedly in the cases which he describes. This result is surely not such as to induce any one to adopt Mr. Hunt's method, or to coincide in the remark, quoted from an English journal in the preface to the German translation of his work, that 'Mr. Hunt has transferred these diseases from the incurable class to the curable.'

"I cannot, then, give my assent to the views of this writer. But it is, nevertheless, quite true that arsenic has a decided curative action in cases of psoriasis, and can make this affection undergo involution for a time, if not permanently. And I must further remark that, although this remedy may be taken regularly for months or even years without the disease being *cured* (by which I mean, cured permanently as well as for the time), I have never seen it give rise to any lasting injurious effects, even when given in pretty large doses.

"The following are the preparations of arsenic which, like other dermatologists, I have employed in the treatment of psoriasis and other cutaneous affections: Fowler's solution (arsenite of potass), Pearson's solution (arseniate of soda), Donovan's solution (iodide of arsenic and arseniuret of mercury), the Asiatic pills (made of arsenic and pepper), and lastly, pills of arsenic and opium.

"Fowler's solution (in a drachm and a half of which there is a grain of arsenic) is employed in doses of six drops daily. It is generally given before a meal, either in water, or in some aromatic infusion, such as the Inf. Menthæ, the Inf. Melissæ, or the Inf. Chamomillæ. If it does not disagree with the patient (producing some ill effect, such as nausea, gastrodynia, or vomiting), the dose may be raised at the end of the first two days by one drop, and at similar intervals it may in this way be gradually increased till it reaches twelve drops daily, by which time some effect will generally be produced. This consists in a diminution of the number of scales on the different patches, in a lessening of the redness observed in the maculæ after removal of the scales, or in their acquiring a brownish tinge, and, lastly, in the cessation of the itching. The remedy may now be continued in the same dose (twelve drops) for a long period. In cases in which, although well borne, it has produced no change in the cutaneous disease, the quantity may be still further increased, but at longer intervals (as, for instance, every four days), until twenty drops ($\frac{2}{9}$ of a grain of arsenious acid) are given. And if this quantity should give rise to no decided alteration in the psoriasis, there is, in the majority of cases, no reason why the dose should not still be increased, until it amounts to thirty drops a day, or ⅓ of a grain of arsenic; for even so large a quantity as this may be continued for a long time, without any harm being done to the patient. If, however, some smaller dose is found to be sufficient by its producing a favorable change in the affection, that dose should be persevered in until the red maculæ have entirely disappeared and have given place to spots of brown pigment, or at least until the disease no longer continues to break out in the punctiform or guttiform state. When this is the case, the quantity may gradually be reduced to the minimum of six drops, with which the patient began.

"I have several times given this preparation for many months without interruption, the quantity taken in a space of about six months exceeding 2,000 drops. And not only has the remedy done no harm to the patient in these instances, but he has been benefited in every respect.

"In other cases, sometimes by way of experiment, sometimes because the arsenite of potass was not well borne, I have employed the solution of Pearson, in praise of which so much has been said. This preparation, the *Liquor Sodæ Arseniatis*, consists of the arseniate of soda dissolved in distilled water in the proportion of one grain to the ounce. Twenty drops contain 1/24 of a grain of the salt. It is therefore much less active than the Fowler's solution, and is given in a dose of forty-five drops daily, or fifteen drops three times a day. It is usual to begin with this quantity, and to continue it without increase or diminution until the above-described changes in the cutaneous disease make their appearance. Another preparation of arsenic mentioned in many books on Dermatology, as well as in those on Materia Medica, is one of Biett's, the solution of arseniate of ammonia. This, like that of which I have just been speaking, contains a grain to the ounce, and it is given in the same way.

"Donovan's solution is prepared by rubbing together, in a mortar, 39½ grains of arsenious acid, 76¼ grains of pure iodine, and 100 grains of mercury, moistened with a little alcohol, the trituration being continued until the mass has become perfectly dry. To this is then added hydriodic acid, of which a quantity corresponding to 32½ grains of iodine is mixed with four ounces of distilled water. The product is shaken up with three more pints of distilled water and boiled down till a liquid is obtained weighing 1,300 grains. This solution is perfectly transparent, has a high specific gravity, and yields no fixed residue on evaporation. It is given in a mixture which contains a drachm of the solution and half an ounce of syrup of ginger to three ounces of distilled water, and of which three tablespoonfuls are given daily. I have made trial of this preparation in various forms of cutaneous disease, but I have never seen it produce any very good effects.

"The 'Asiatic pills,' on the other hand, are a really good medicine, not only on account of their therapeutical value, but also because there is no difficulty in their preparation, and because their dose can be easily regulated, and they can be given without trouble. They are prepared by mixing 66 grains of arsenious acid and 9 drachms of powdered black pepper with gum-arabic and water, so as to make 800 pills. Each pill therefore contains 0.0825 of a grain of arsenious acid. In most instances it is sufficient to give three pills once a day, the best time for the patient to take them being immediately before dinner. But in cases of obstinate psoriasis, I have sometimes raised the daily quantity to twelve pills (0.99 of a grain of arsenious acid), and have continued this dose for many months without diminution. In this way, it has several times occurred that the patient has taken the enormous quantity of 2,000 Asiatic pills (or more than 160 grains of arsenious acid) before he has got rid of the disease. It is, of course, absolutely necessary that persons to whom these large doses of arsenic are being given should be carefully watched, and should be constantly under medical observation. In no instance, however, have I seen any ill effects produced; and therefore I can with confidence recommend to my professional brethren the practice of giving the Asiatic pills, even in such large quantities as I have mentioned, to patients suffering from these intractable diseases of the skin.

"In some cases, again, I have prescribed arsenic in combination with opium, under the idea that it would be more easily borne by the patient when administered in this way. I have ordered, for instance, a grain of arsenious acid and four grains of opium to be mixed with sufficient soap to make sixteen pills, and have given four of these daily, two in the morning and two in the evening. I have continued the administration of these pills likewise for months, and with the desired effect.

"The preceding paragraphs show that I must have made numerous trials of the various preparations of arsenic. I have, in fact, given it to more than 400 patients suffering from different forms of cutaneous disease; so that I can, from my own observation, assert the therapeutic value of this remedy. I can, however, by no means ascribe to it the power of *curing* infallibly chronic affections of the skin. To do this, arsenic should be able not merely to cause the disappearance of existing eruptions, but to *prevent their recurrence.* The fact is, however, that under the employment of each one of its preparations, I have, in different cases, seen the disease break out again or undergo relapse. Thus, while the special action of the arsenic is exhibited by its removing the scales from some of the older patches of a psoriasis, and changing their red color to brown, new spots often continue to break out at points hitherto free from the disease. These remedies, then, possess the power of removing existing eruptions, but are not able to prevent the occurrence of fresh ones. They are, however, the most efficient of all the internal medicines of which I have had to speak, and it may be said that they alone, among these medicines, can by most persons be taken for a great length of time without injury to the health.

"To enable me to give an account of the numerous *local applications* which have been recommended for the cure of this disease, I must arrange them under different heads.

"*Water.*—I will begin by speaking of water as a local remedy for psoriasis. Under this category must be mentioned water-dressing, baths, vapor-baths, the 'hydropathic' method practised by Priessnitz and others for the cure of various complaints, hot springs, and, lastly, the 'continual bath,' invented by myself.

"And, first of all, I may state that simple *water-dressing*, if continued long enough, may remove a psoriasis. For this purpose, clean strips of bandage are used. These are dipped in lukewarm or warm water, and are wound round the affected parts, and covered with thin gutta-percha or oil-silk, so as to retard evaporation of the water and to increase the effect of its application. Patients who are being treated in this way need not be kept in bed, or even within-doors, but may be allowed to go out in the open air. In the less severe forms of psoriasis, and especially when the affection is confined to the limbs, this method is very often sufficient to remove it entirely ; but in all cases it may be employed as an adjuvant while internal medicines are being given, or as a substitute for the warm bath when this cannot be obtained. Instead of the water-dressing, if anything should prevent its application as above described, it may be sufficient to wrap the affected parts simply in thin gutta-percha or oil-silk. The products of the cutaneous perspiration will then accumulate between the skin and its impermeable covering, so as to form a layer of fluid which, remaining always in contact with the skin, keeps it constantly moist.

"It is generally supposed that *warm baths*, at an agreeable temperature (90°—100° Fahr.), are essential to a patient suffering from cutaneous disease, and that, in psoriasis especially, they are of great service. Now this I altogether deny so far as the baths in ordinary use are concerned, in which a person remains for only half an hour or an hour; for I have never seen them diminish, and certainly never cure, this affection. It is true that when baths are continued for several hours, or when my 'continual bath' is employed, more marked effects are observed; but even then they appear much more slowly in this disease than in many others; consequently, I cannot recommend the use of warm baths in cases of psoriasis, excepting, indeed, in so far as they are an essential part of other methods of treatment.

"Now, if I make the employment of warm baths, and even of the continual bath, a very subordinate part of the treatment of psoriasis, I attach still less value to vapor-baths. And yet, according to some, these have special curative powers in the disease in question. The only cases in which it seems to me desirable to order vapor-baths are those in which water-dressing cannot be applied, and warm baths cannot be used, either because the patient's circumstances do not permit it, or because the disease is situated on some part of the body (as, for instance, the face or head) which is not accessible to the ordinary warm bath. I do not, however, mean to say that the existence of psoriasis upon the other regions of the body contraindicates the employment of the vapor-bath, but only that it must not be supposed to be more efficacious than an ordinary warm bath.

"The effects of *peat-* and *mud-baths* are about on a par with those of water-dressing.

"*Hydropathy*, however, according to the original method of Priessnitz, is a much more effectual mode of treating psoriasis. A most essential part of this procedure is that in making up the patient's bed, the directions which are given should be strictly obeyed. The proper plan is the following: Over an ordinary bed, having a straw mattress as well as a common mattress, a sheet of thin gutta-percha or oil-silk is laid, to prevent the mattresses getting wet. Across this there are then placed two strong binders, or folded towels; upon these, a thick, fleecy blanket, doubled and folded in such a way as to project a little beyond each end of the mattresses; and upon this, again, a linen sheet which has been dipped in cold water and well wrung out. The patient, who must be quite naked, is now made to lie down on the sheet, with a bottle between his thighs to receive his urine. He is next completely wrapped up in the wet sheet, so that the head and forehead are covered as low as the eyebrows, and the ears and cheeks round to the chin, the sides of the sheet being, of course, wound about the trunk and limbs. The blanket is then wrapped round him in exactly the same way; the nose, mouth, and eyes being thus the only parts left exposed. Finally, the binders or towels are tied so as to keep the blanket and sheet in close contact with the patient's body.

"It is only at first that uncomfortable sensations arise from this procedure, which is known as 'packing' ('Die Priessnitzsche Einwickelung'); these are at once followed by a glow, which, however, does not exceed the natural temperature of the body, and which, besides being very beneficial, is not disagreeable, provided that respiration is established. To favor sweating, and also to cool the patient, water is frequently given him to drink, and the 'packing' is left undisturbed for three or four hours; at the end of this time, when he has thus been bathed in his own perspiration, the second part of the treatment begins, that of cooling him down. For this purpose, a bath (either in the same room, or in one close to that in which the patient lies packed) is filled with cold river- or spring-water; and, when possible, a douche apparatus also is provided. The lower of the two binders, which surrounds the patient's knees, is now unfastened, and the blanket and wet sheet are drawn away from his feet and raised, so that he can get up from his bed and walk to the bath. When he has reached its side the second binder also is undone, the blanket and sheet are quickly removed, and he is told to plunge instantly into the cold water. While in the bath he is rubbed with cloths, and is also made to rub himself, and to move about in the water. By these means the disagreeable sensation at first caused by the cold water is relieved, and is soon followed by a feeling of warmth, which every one describes as being very pleasant and comfortable. Next, if there is a douche apparatus connected with the bath, it is made to play on every part of the patient's body; but when this cannot be done, sponges dipped in cold water are used instead, or water is poured over him from a can. Lastly, having been made to leave the bath, he is wrapped in dry cloths, and frictions are again employed. He is then quickly dressed and made to take a walk in the open air.

"The whole of this process, including the cold bath and the douche, as well as the 'packing,' is gone through twice in the twenty-four hours; early in the morning (generally at 4 or 5 A.M.), and again some hours after dinner (at 4 or 5 P.M.). At the same time the patient is kept on a nutritious, but simple, diet; is forbidden to partake of alcoholic liquors, and is made to drink cold water frequently.

"Having myself had recourse to this method of treatment with marked success on many occasions, both in hospital and in private practice, I can with a good conscience recommend its adoption in all those cases of psoriasis in which the disease is extensive, and in which it is possible to carry out a practice requiring so much time and patience. As I have already said, however, it is essential that the 'packing' should be done carefully, and that (if employed at all) it should be persevered in; nor must it be expected to do more good than other kinds of systematic local treatment.

"The method recommended by Priessnitz at a later period—that of frictions—is very much less effectual than the process of 'packing' above described. It consists in wrapping up the patient successively in several cloths soaked in cold water, and then employing friction at once, without having made use of blankets. He is afterward simply made to take a cold bath, and to have the douche applied.

"Psoriasis is so obstinate and difficult of cure that every spa and watering-place in the world has probably been visited by patients affected with this disease, belonging to the more wealthy classes. Yet there is not one such locality which has been able to earn a permanent reputation for its treatment. Neither sulphur springs, nor those containing iodine, nor those which have brine as their principal constituent, nor, lastly, those in which there is no special ingredient (indifferente Thermen), have shown themselves to be possessed of specific powers against psoriasis; and although one or two watering-places have gained somewhat more renown than others, this has been due merely to the way in which the baths are used, and not at all to the chemical composition of the water. The remark just made applies mainly to the baths of Louèche (Leuk) in Switzerland, which are frequently recommended by German as well as by French physicians to patients suffering from cutaneous diseases (especially psoriasis), and have, in certain cases, been resorted to with success. At this spa a peculiar custom prevails which does not exist elsewhere. The patient does not merely spend half an hour or an hour in the bath, but remains in it for six or eight hours at a time—from early in the morning until dinner time. Thus, for equal periods of treatment, the time devoted to the bath is about six times as great as at other watering-places. I am firmly convinced that Louèche owes to this circumstance most of its fame for the cure of cutaneous diseases. For certain other spas (such as Baden near Vienna, Gastein, and Krapina-Töplitz in Croatia), which are made use of in the same thorough way by visitors, particularly by persons who belong to the country, do, in fact, enjoy a similar reputation both abroad and at home.

"As I stated in the first volume of this work, when speaking of the treatment of smallpox and of burns, I have had an apparatus constructed by means of which the warm bath may be continued for a long time, the patient in fact remaining uninterruptedly day and night in warm water. I have made trial of this apparatus in psoriasis, as well as in the diseases above mentioned. The effect, however, has merely been such as I could have arrived at by using lotions or any other topical applications by which the cuticle would be kept in a state of maceration. The complaint has not been cured.

"In concluding the subject of the treatment of psoriasis by means of water, I must also mention bathing in the sea, or in ponds, lakes, or rivers, but only to state that it is useless.

"*Soap.*—The well-known action of alkalies upon the cuticle, and upon the horny tissues generally, explains why soaps have been so commonly employed for therapeutical purposes, as well as to cleanse the healthy skin. It seems as though instinct leads men to use water and soap in all cutaneous diseases in which epidermis is formed in excessive quantity, and accumulates in the form of scales upon the surface. It is, therefore, not surprising that we find soap praised as a local remedy for psoriasis; and the praise is in fact deserved, provided that the right kind of soap be employed, and in the right manner. Common washing soap (soda-soap), used in the ordinary way, as for washing hands, will not, indeed, answer our expectations, for by it the disease is either not cured at all, or only after a very long time. But if potass-soap be employed, and in a methodical and energetic manner, very successful results may be obtained.

"I will speak first of the soap itself, and then of the way in which it is to be applied. And, in the first place, I must remark that, in endeavoring to procure a good potass-soap, one should not go to the apothecary's shop, but, if possible, to some manufactory in which it is made on a large scale. Pfeuffer, and other medical writers, have, indeed, taken the trouble to lay down a formula for the preparation of soap in the pharmaceutical laboratory, but they have forgotten that saponification is not to be effected by merely mixing certain quantities of alkali and fat together, and that it is important to be acquainted with practical details known to those only who are engaged from year to year in the soap manufacture. Repeated observation has taught me that most variable effects are produced by soft soap prepared by these methods in the apothecary's shop. At one spot it will completely denude the skin of its epidermic covering, and expose the corium; in another place it has no more effect than so much oil. In the first case, it produces a number of painful excoriations, by which further treatment is interfered with; in the second case, it is altogether inert. In asserting that it is not advisable to use potass-soap prepared by the apothecary, I do not, however, mean to say that what is procured at the druggist's shop is never well made. On the other hand, I am quite aware that the soap of commerce is by no means necessarily free from faults, for it very often contains small carbonaceous particles and ashes, which render it gritty, and make it very apt to produce irritation when applied to the skin.

"Good soft soap, or potass-soap (Schmierseife, grüne Seife, sapo viridis, sapo kalinus, savon vert), should be somewhat thicker than syrup, or of about the consistence of Roob Laffecteur, so as not to flow out when the jar containing it is turned upside down. It should be of an olive-green or brown color, and should have an acrid alkaline taste when put on the tongue. It ought not to be at all gelatinous, but rather of a pulpy character, and perfectly homogeneous. It should have no rancid smell. It should be dissolved by alcohol, without any residue of consequence. Lastly, no particles of sand should be discoverable in it, when it is rubbed down between the fingers.

"To remove the unpleasant smell which always belongs to potass-soap, it may be dissolved in alcohol (in the proportion of two parts of soap to one of alcohol), and this solution, after being filtered or allowed to settle, may be scented by the spiritus lavandulæ, or any other aromatic spirit. In this way all the therapeutical effects of the soft soap may be obtained, while its disagreeable odor is avoided, and the particles of sand which it contains are got rid of. To distinguish this solution from the ordinary spiritus saponatus, made from soda-soap, I term it the *spiritus saponatus kalinus.*

"In the use of this liquid, or of the potass-soap itself, the main points to be attended to are, that the application should be brought into immediate contact with the surface of the skin, and be left there for a long time. It is not sufficient to rub in the remedy and immediately afterward to wash it away. The soap must be allowed to remain upon the diseased part for several days, and sometimes even for weeks together. It must, in fact, be employed in the same way and on the same principles on which we should make use of water-dressing or of a lotion (in Gestalt und nach dem Principe von Umschlägen). There is a very wide difference between rubbing in an ointment of which the constituents are expected to penetrate the different layers of the skin, and to be absorbed by the vessels and thus to enter the circulation, and using a remedy whose main action is supposed to be to soften and *macerate* the epidermis, or to destroy it. The longer such a remedy is left in contact with the cutaneous surface, the more certainly will the object of its use be attained.

"It was in the so-called 'English method' of curing scabies that the practice was first introduced of wrapping patients stark naked in blankets, and rubbing sulphur ointment or soft soap over the whole body. It was then observed that by this plan of treatment the epidermis was extensively softened and destroyed, and this naturally led to the employment of the same, or a similar, method in other cases of cutaneous disease, particularly those which, like psoriasis, are widely diffused over the surface of the skin. Thus Pfeuffer recommends that the patient should be wrapped for six days at a time in blankets, and should be rubbed twice daily with soft soap. Of this he gives him eighteen ounces, divided into six portions, three of which contain four ounces, and three two ounces each. On each of the first three days four ounces are used, half that quantity being in the morning rubbed over all parts of the body by means of pieces of flannel or flesh brushes, and the remainder being applied in the same way at night. During the last three days of the treatment an ounce is sufficient for each time of application—for not only is the epidermis itself now to a great extent softened, but the blankets are impregnated with a good quantity of the soap. At the end of the six days Pfeuffer advises that the patient should be allowed to take a bath, and this completes a course of the 'soap cure.'

"In some of the less severe cutaneous diseases, such as pityriasis versicolor, herpes tonsurans, etc., in which the morbid products occupy only the most superficial layers of the cuticle, a cure may be effected by making the patient lie in blankets for six days, and rub in soap in the manner above described. But psoriasis, even in the mildest form, is not one of the complaints which can thus be removed by a 'soap cure' of six days' duration.

"A further disadvantage of this method of Pfeuffer is that its completion within the period named is merely nominal. The patient is unable to get up for several days afterward, for he can generally neither walk, nor stand, nor move his arms. The skin over the flexures of the joints is, in fact, so tense and painful, that he cannot extend his limbs.

"These defects, which must be apparent to every one who employs the soap-cure in practice, have caused me to modify somewhat this method of treatment. For instance, in a case of psoriasis diffusa inveterata, in which the whole surface of the body is affected, I have soap rubbed in twice a day, in a quantity which varies with the age and size, and also with the susceptibility (Vulnerabilität) of the patient, but which is generally from about two to four ounces daily. Young women, in whom the skin is delicate and contains but little pigment, naturally require a smaller amount than strong, heavy adults, whose epidermis is of a dark color. It is, however, essential that the soap should be firmly rubbed into each individual patch of psoriasis by means of a piece of flannel or a brush, till the accumulated masses of epidermis are removed, and a little blood is seen to ooze from the red base which has thus been exposed. To diminish the painfulness of this procedure, the body should be divided into regions, and a different region should be especially attended to each time the soap is used. For instance, on the first occasion, some particular part, such as the right arm and forearm, should be rubbed forcibly till it bleeds, while the remedy is only applied gently to the rest of the body. Next time, on the other hand, the more energetic frictions may be limited to the left upper limb, and so on, until at the end of six or eight days every part of the cutaneous surface has been rubbed in such a way as to produce slight bleeding. Within the period named, then, according to the severity and extent of the affection, the frictions are completed; but the patient must not be permitted to take a bath, or to give up lying in the blanket impregnated with soap. In this he must still remain for at least three or four days after the rubbing is discontinued, in fact leaving it only when extensive desquamation has commenced, so that the whole cuticle is peeling off in large lamellæ. Moreover, until this takes place, he must not be allowed to take a bath, to change his bed- and body-linen, or to dress himself. It is, however, in but few cases that even this energetic course of treatment effects the result aimed at, the cure of the psoriasis. But the repeated employment of the same treatment, or a combination of it with other procedures to be hereafter described, will nevertheless often be successful.

"Moreover, I frequently apply the soft soap without wrapping the patient in blankets. In cases of psoriasis and other skin affections I often have this substance forcibly rubbed into the skin, in order to soften and remove the masses of epidermis, and thus to smooth the way for the employment of other remedies, and enable them to produce their full effects.

"When psoriasis affects only a few parts of the body, such as the elbows and knees, or is confined to any other special region, my usual plan is to make a sort of plaster by spreading soft soap, like an ointment, over pieces of flannel, and to apply these to the spots affected, until they soften the epidermis and remove the masses of scales.

"The variety of psoriasis in which I have found the soft soap (and particularly the spiritus saponis kalinus) most useful is that affecting the hairy scalp. I must, however, mention the remarkable fact that the disease is much less obstinate and yields more readily to treatment when it occupies the head and face than when it is seated on other parts of the body. In fact, in cases of psoriasis confined to the head I have never failed to cure the complaint pretty quickly by having the part repeatedly washed with the spiritus saponatus kalinus, without making use of any other remedy.

"*Medicated soaps.*—These substances which have been made both by chemists and by manufacturers, may be employed with advantage in the treatment of psoriasis as well as of many other cutaneous affections. A great argument for the use of soap as a vehicle is undoubtedly the fact that that substance is so easily and so conveniently applied; and the potass (or soda) and fat which these medicated soaps contain, so far from interfering with their efficacy, very frequently promote it by softening the epidermis. A variety of medicinal substances, among which are iodine, iodide of potassium, sulphur, iodide of sulphur, tar, graphite, benzoin, Carlsbad salt, etc., have been introduced into such soaps. Efforts have also been made to increase their good effects by the addition of glycerine, and to give some of them a fluid form.

"I have repeatedly made use of these medicated soaps in every variety of cutaneous disease. But, although I cannot mention anything as especially contraindicating their employment, I have found very few of them to possess the efficacy which their inventors and makers would like to claim for them. The most important among them are those which contain sulphur, iodide of sulphur, or tar. The last of these is particularly to be recommended in cases of psoriasis, and therefore I shall refer to it again, and in the next paragraph, when I am speaking of tar as a remedy in this disease, I shall give the indications for the use of tar-soap, and the mode of applying it.

"*Tar.*—This substance was employed in the treatment of cutaneous affections even by Theophrastus, Dioscorides, and Plinius; but later physicians, following Galen in ascribing all diseases of the skin to an acrimonia sanguinis, rejected all local treatment, and so tar became forgotten.

"In the year 1744, however, Berkeley, Bishop of Cloyne in Ireland, wrote a treatise on the tar-water, which he recommended as a universal remedy, and especially for the cure of phthisis; and the efficacy of tar in the form of vapor was afterward vaunted for various internal complaints by many writers, including, among the English, Ellis Lind, Ramspak, Crichton, Forbes, and Thomson; among the French, Debois and the brothers Le Beau; and, among the Germans, Hufeland, Neumann, Pagenstecher, and Wendt. Still it is only in quite recent times that tar has again been brought into repute, and that its specific action on the cutaneous diseases of man and of the lower animals has been fully recognized. In England, Bateman and Wilkinson; in France, Rayer, Cazenave, Girout, Gauthier, Emmery, Bazin, Serre, Gibert, and Devergie; and in Germany, Hertwig, Krieg, Otto, Cless, Veiel and myself, have repeatedly demonstrated the remarkable efficacy of this agent in the treatment of many skin affections, and have aided in making it generally known.

"Tar is well known to be an empyreumatic oil, obtained by the dry distillation of coal or of different kinds of wood. Several varieties of it are used in the treatment of cutaneous diseases. Such are the *oleum empyreumaticum coniferum*, derived from the wood of the spruce, the silver, or the Scotch fir; the *oleum fagi*, obtained by dry distillation from the beech; the *oleum cadinum* (huile de cade), distilled from the wood of the *Juniperus oxycedrus;* and lastly, the *oleum betulæ* seu *oleum rusci*, which comes from the bark of the *Betula alba.*

"The effects of these four empyreumatic oils, and also of that made from coal (the *oleum ligni fossilis empyreumaticum*), are nearly identical, and therefore in countries in which they are all to be obtained the one most employed will of course be that which possesses fewest of the disagreeable qualities of tar. These are especially the sharp penetrating smell, the dark color, of which it is so difficult to free the skin, and the viscidity. Now, from this point of view, the *oleum rusci* is to be preferred to every other form of tar, for it possesses the least disagreeable odor, being, in fact, the substance which gives to Russia leather that peculiar smell which is so fashionable at the present day under the name of '*parfum russe*.' Next to the *oleum rusci* must be placed the *oleum cadinum;* then the *ol. coniferum*, then the *ol. fagi*, and lastly the *ol. ligni fossilis empyreumaticum*, which has a most disagreeable penetrating smell, resembling that of coal-gas.

"These empyreumatic oils are sometimes employed by themselves; sometimes they are combined in various proportions with other substances (such as soda-soap or the spiritus saponatus kalinus), forming in the one case a solid (feste Theerseife); in the other case a liquid compound (flüssige Theerseife); with solid fats, in the form of ointments; with fluid fats (such as the various oils, cod-liver oil or glycerine), in the form of liniments; lastly, they are sometimes suspended in alcohol, forming tinctures of various strengths.

"By repeated distillation of these different tarry oils, and particularly of the oleum cadinum, three new products have recently been obtained, which have been named by Pereira resinon, resineon, and resinein.

"Of these substances I have employed resineon without admixture in many cases of psoriasis. My directions for its use have been to first rub the individual patches with soft soap, and afterward to pencil them over with the resineon. This agent has, however, several disadvantages;

it gives rise to more severe and more long-continued sensations of burning than tar, it dries slowly, and it has a very penetrating odor; it also frequently sets up a reactive dermatitis, and is apt to produce acne. For these reasons ordinary tar is to be preferred to resineon in the treatment of psoriasis. When made into an ointment, however, it does not give rise to so much irritation.

"Again, I have used the carbolic acid in some cases, both locally and as an internal medicine; and the experiments which I have made with it have in part been very successful (theilweise sehr gelungen).

"As for the tarry oils themselves, and the preparations made from them, I have had opportunities of employing them in many forms of cutaneous disease, and particularly in psoriasis; and my observations have shown to me both the advantages and the disadvantages of their use, and have taught me their action on the healthy as well as on the diseased skin. These are, in fact, points which it is necessary to be well acquainted with, and to pay due attention to, in employing tar; for otherwise the beneficial effects of the remedy may be overpowered by certain unpleasant results which it produces. Thus, although the symptoms of reaction produced by the application of tarry preparations to the healthy or even the diseased skin are, in the vast majority of instances, very slight, and may even be altogether absent (particularly when the remedy is applied only to parts of the body), there are some persons in whom it very readily produces injurious effects. A single application of any tarry substance to the cutaneous surface is, in these subjects, at once followed by swelling and redness of the part, an increase of the temperature, sensations of tension and pain, and even by the formation of vesicles and bullæ. In fact, we may in this way produce every symptom of a dermatitis, or an Erysipelas vesiculosum s. bullosum, which, moreover, does not at once subside even when the tar is quickly removed, but runs the ordinary course of an inflammation of the skin. In other cases, again, tarry applications are very well borne for a considerable time, and produce the desired effect; when suddenly reaction sets in, and the above-described symptoms of dermatitis appear and prevent the further application of the remedy. One invariable result of the long-continued use of tar is that the hair-sacs become inflamed and swollen, so as to form papules of the size of hemp-seeds, or even as large as lentils, and thus that an eruption resembling an acne is produced, which is, however, very easily distinguished from all other forms of this affection by the fact that a black tarry point like a comedo always occupies the centre of each papule.

"I propose to give to this eruption the name of tar acne (Theeracne). Its occurrence, of course, renders the discontinuance of the remedy absolutely necessary.

"Again, tar has often and most justly been recommended against the subjective sensations caused by cutaneous diseases, but its influence in this respect is liable to certain exceptions. In most instances we do find that the itching is relieved or altogether removed by the inunction of this substance. Sometimes, however, an exactly opposite effect is observed, the itching becoming insupportable; and yet there may be nothing in the objective symptoms to explain the peculiar action of the tar in such a case.

"Moreover, when tar is rubbed into the skin of the whole body, there arise symptoms which prove incontestably that it is absorbed into the blood, and discharged by the excretory organs, and particularly the kidneys and the intestines. In some persons these symptoms appear within half an hour; in others only after a longer interval, perhaps three or even six hours after the inunction of the remedy. They vary in different cases. Sometimes the patient vomits a black fluid; sometimes he passes black fæces; sometimes (and most frequently) he voids urine which, though transparent, is of a dark olive-green color, or even as black as ink, and possesses a distinct tarry odor, made still more evident by the addition of a few drops of sulphuric acid. In several cases in which I have employed inunctions with tar, it has thus been excreted in the urine and in the fæcal evacuations, and this fact is interesting to physiologists as proving that, even while the epidermis is uninjured, it is possible for substances to pass through the skin and be absorbed into the circulation, and also as being opposed to the hypothesis that bodies in the state of vapor can alone penetrate the cutaneous tissues. One of the Viennese chemists who supports this hypothesis has, indeed, stated with reference to this point, that black urine is excreted, not only by those who have actually been rubbed with tar, but also by those who are in their neighborhood, as, for instance, by patients occupying the adjacent beds in a hospital ward. But although I have many times looked for such an occurrence, I have never succeeded in observing it. In my *clinique* black excrements smelling of tar have been passed by those only to whom this substance had been applied, and never by any other patients or by any of the nurses who were constantly in the ward. This surely goes to prove that the tar is absorbed as such by the skin, and not in the gaseous form through the lungs.

"The entrance of tar into the blood is by no means unattended with signs of reaction. Sometimes the patient is attacked by shivering; sometimes he suffers from nausea and vomiting, and from oppression of the head; sometimes he passes several fluid evacuations soon after the application of the remedy. These unpleasant symptoms are, however, never of long duration, and subside entirely when free diuresis has established itself. And they may very easily be obviated by making the patient (both before the tar is rubbed in and afterward) take plenty of water, eau sucrée, tartaric acid, or some other diuretic, so as to increase the quantity of his urine. When tar or any of its preparations, instead of being rubbed over the whole body, is applied to certain parts of it only, the effects I have been describing are never observed.

"Before applying pure tar or any preparation of it to the skin, it is necessary that the morbid products which are present in greater or less quantity should be removed. In treating a case of psoriasis, for instance, the scales must first be detached, in order that the tar may be brought as intimately as possible into contact with the vascular structures of the integument. Hence, to attain a successful result, it is always requisite before using the tar to place the patient under one or the other of the above-described methods of treatment, by which the epidermis may be softened and the masses of scales removed. He may, for example, be kept in a bath for a considerable time, or subjected to the hydropathic method; or water-dressings may be applied to the parts affected. Afterward either of the above-mentioned kinds of tar may be applied, the best being the Ol. rusci. *A small quantity* of it is to be placed on a brush made of long bristles, and rubbed forcibly into the skin of the patient.*

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* I am convinced that it is not a good plan to apply tar, as is generally done, in large quantities, and with but little force. The object should evidently be to bring the remedy as intimately as possible into contact with the skin; and this is, of course, effected more completely by energetic friction than by spreading a thick layer of tar over the surface.

"Now, when he has in this way had his skin impregnated with tar, the patient must not resume his ordinary dress, particularly if his underclothing is made of cotton or linen. For the capillarity of these fabrics favors the penetration of the remedy into their substance, and thus removes it from the surface of the skin. Hence, it is necessary to cover him with clothes made of textures which have little or no power of absorbing tar. Thus, a jacket and trousers of sheep's wool may be made beforehand, and put on as soon as the inunctions of tar have been commenced. Or we may adopt another plan, and spread over the patient's usual bed a large blanket or (in the case of a delicate individual) a sheet made of flannel for the purpose. Upon this he is to be laid in a state of perfect nudity, after having been completely covered with the tar. The blanket may then be wound round him, or, if this be preferred, a similar one may be spread over him in such a way that he is completely enveloped in woollen coverings.

"Thus clothed or wrapped up, the patient is to be left until the tar on his skin has become quite dry, which will take from two to six hours, according as one or another preparation may have been employed. When this has occured, however, he may be allowed to resume his ordinary linen and clothes, and need no longer be confined to his bed or even to his room. The same plan must be adopted, when, instead of pure tar, an ointment, soap, or alcoholic solution of the remedy has been used; but, as I have already mentioned, the period during which the patient must remain enveloped in woollen coverings varies according as the substance applied dries more or less quickly.

"This procedure is to be gone through once or twice daily, according to the severity of the case and the degree to which the skin is tolerant of the treatment. The same means which were employed before the first frictions may, with advantage, be repeated before each new application of the remedy for the purpose of removing the older layers, and so facilitating the penetration of a fresh quantity of tar into the skin.

"The changes which show that a preparation of tar is exerting a curative action on the affected parts of the skin consist in the red patches beginning to grow pale, and in the renewal of the scales taking place less quickly, and after a time ceasing altogether. There is, in fact, a gradual subsidence of all the morbid symptoms. When the diseased parts (in psoriasis, the patches) have lost their bright-red color, and acquired a brownish or yellowish red tint, and when the morbid growth of scales has entirely ceased, it is time to try the effect of suspending the application of the tar. And then, if at the end of a week or a fortnight no fresh redness has made its appearance, and no new scales have been formed—if the old patches continue to grow paler and their surface remains smooth and free from scales—we may in this case entirely discontinue the treatment, and wait quietly for the restoration of the skin to a perfectly normal condition by the absorption of the deposits of pigment which remain.

"*Solution of sulphuret of calcium* (Kalkschwefelleber-Lösung).—This application was first recommended by Vlemingkx, a staff-officer in the Belgian Army Medical Service, for the cure of scabies, and has proved to be of considerable value. I have likewise tried it in many other cutaneous diseases, and among them in psoriasis, and have found it very useful. A Viennese chemist, Professor Schneider, has altered the method of preparing it; and, for some years past, that which I have employed in the General Hospital has been made according to his formula, which is as follows: ℞. *Calcis vivæ libram, sulphuris citrini libras duas. Coq. c. aq. fontis libris viginti ad remanentiam librarum duodecim. Fluidum refrigeratum filtretur, et detur usui.* This process yields a dark orange-yellow, slightly caustic fluid, which smells strongly of hydrothion. The remedy should be applied immediately before giving the patient a bath, and the best way of doing it is the following: A bit of flannel or a piece of pumice-stone is dipped into the fluid, and with this each patch of psoriasis is rubbed till slight bleeding takes place. The solution is then once more applied to the spot and is left on it to dry. When this has occurred, the patient is put into a warm bath, in which he is left an hour. At the end of that time he is further washed with pure cold or warm water, and his skin is then anointed either with simple oil or fat, or with one or other of the ointments (to be hereafter specified) which are compatible with the sulphur-compound. This is essential, because even by the most careful cleansing the sulphur cannot be entirely removed from the surface of the skin.

"This treatment is so painful that it cannot be applied to a large part of the surface at one time. The affected spots must be attacked separately: and this is the more practicable, because a single application of the solution of sulphuret of calcium to a patch of psoriasis, if done properly, is sufficient to destroy it completely.

"If, however, a less painful (but, at the same time, a less effectual) method be preferred, the solution may be rubbed in less forcibly on each occasion; but it will then be necessary that it should be applied more frequently, or to a larger part of the surface.

"One effect of the energetic application of this solution is that black crusts, formed from dried blood, appear in the place of those patches which had been rubbed until they bled. At other spots, where the skin has been excoriated, a superficial suppuration may take place. This likewise leads to the production of crusts, but they are of a brown color. The new epidermis which is developed beneath them is always healthy.

"Frictions with Vlemingkx's solution must be applied more gently to the skin over the elbows and knees, and over other joints, lest the tension and pain produced by them should needlessly interfere with the movements of the limbs. This method is therefore most suitable to cases in which psoriasis occupies the trunk, thighs, or calves of the legs; and generally to cases in which the seat of the disease and its intensity are such as to render an energetic treatment practicable and even advisable.

"The frequency with which the application of this solution must be repeated varies with the degree of force employed, and the severity of the disease. If the less energetic method is adopted, the sulphuret of calcium must be applied every day, and be followed by a warm bath on each occasion. But if it is thought desirable to use such forcible friction as to make each patch of the psoriasis bleed, sufficient time must be allowed after each application for the disappearance of the effects produced by the caustic action of the liquid, or, in other words, for the separation of the black or brown scabs which result from its use. For this, as a rule, a week is long enough.

"In addition to the therapeutical measures which I have hitherto been describing, adapted to cases of extensive psoriasis, I have still to mention certain remedies which are often made use of in the less severe forms of the disease, or are employed in conjunction with other applications, or, lastly, after other plans of treatment, for the purpose of removing the last marks of the patches. Among these are the white precipitate, the acid nitrate of mercury, the proto-iodide and the deuto-iodide of mercury, and naphthalin.

"The first three of these compounds (the white precipitate, the acid nitrate, and the proto-iodide of mercury) are especially adapted to cases of psoriasis of the scalp and face, their value in these local forms of the disease being due partly to their having a less powerful irritant action, and (in the case of one of them) partly to the absence of color. They are prescribed in ointments of the strength of a drachm to the ounce of *Ung. simplex*. One of these may be forcibly rubbed with the finger several times a day into the parts affected, which must first have been cleaned so as to remove the masses of scales; but, when practicable, it is still better to spread the ointment upon linen, and to lay this upon the patches. Even when such an ointment is applied, particularly if the scalp is the seat of the disease, an occasional washing with soft soap or the spiritus saponatus kalinus will considerably hasten the cure. This, however, might easily be inferred from what has been already stated.

"The deuto-iodide of mercury, on the other hand, is a far more irritant substance, especially when, having been previously prepared, it is made up into an ointment in the proportion of ten or twenty grains to the ounce of lard. In the form suggested by Rochard, of Paris. its effects are, however, less severe. The salt is then made at the time by fusing together iodine and calomel. Rochard's formula is as follows: ℞. *Iodinii puri grana septem ; calomelanos, scrupulum unum. Leni igne fusis adde unguenti communis uncias duas.* A disadvantage of this preparation is that sometimes only a proto-iodide is formed, the ointment being then of a yellow color, while at other times the deuto-iodide is produced, so that the ointment is reddish. This, of course, shakes the patient's confidence, and therefore, to avoid such a result, I employ instead of the *Ung. simplex* the *Ung. rosatum*, which is itself red.

"The *Ung. hydrarg. deuto-iodidi*, in the form recommended by Rochard, must be used with greater caution than the other preparations of which I have been speaking. It may either be used as an auxiliary in cases which are at the same time being treated with baths or by the water cure, with soft soap or with the solution of sulphuret of calcium; or it may be employed by itself and independently of all other remedies. In the latter case it is applied to the patches once or twice daily for several days in succession, until excoriations are formed, or considerable swelling occurs, sometimes even attended with the formation of bullæ. Another method of employing it, like the ointments above mentioned, is to spread it upon small pieces of lint, of exactly the same size as the patches of psoriasis, and to continue applying these until the inflammatory symptoms of which I have just been speaking make their appearance.

"*Naphthalin.*—This substance, which has quite recently been introduced into medical practice, is used in the form of an ointment containing one drachm of naphthalin to an ounce of lard. According to the laudatory statements of those who devised it, it has proved of service in cases of psoriasis of no great severity. I can say very little as to its value from my own experience; for I have as yet employed it in too small a number of cases to be able to express a final opinion with regard to it. It is certainly a desideratum to find a preparation which should offer to the practitioner the advantages possessed by tar, without the black color and disagreeable smell of that substance.

"I have now described, in regular order, the different remedies and the various methods of tre[illegible]sed in psoriasis. But I must not forget to state that more than one remedy, and different methods, must, in most cases, be employed in order to cure the disease. Sometimes, for instance, the cold-water treatment may be combined with the use of tar, the patient being first 'packed' and treated with the cold douche, and afterward rubbed with an ointment, soap, or tincture of tar. In other cases, if the patient, for some reason or other, objects to the application of this substance, we may have to employ instead of it Rochard's ointment, or one containing white precipitate or naphthalin. In a third class of cases, it may appear advisable to begin by applying soft soap, and when this has softened and removed the epidermis, to employ those remedies (such as the preparations of tar or the above-mentioned ointments) which are shown by experience to extirpate psoriasis most rapidly. The quickest possible way of curing the disease is to use the solution of sulphuret of calcium, rubbing it energetically into the skin before giving the patient a warm bath, and after the bath applying the Rochard's ointment or some preparation of tar.

"It is, of course, to be understood that whether for the purpose of satisfying the patient or on account of our own convictions as to their value, we may combine the administration of internal medicines with any of these local methods of treatment. Thus, whatever external applications we employ, we may at the same time give the Fowler's solution or the Asiatic pills, or any other preparation of arsenic, or, indeed, any one of the many medicines already enumerated.

"In prescribing any of these remedies, however, it is always necessary to remember the patient's age and sex, and to allow for the individual peculiarities of the skin. In all cases, too, it is advisable to employ at first applications which have not very irritant properties, reserving for a later period those which are more decidedly caustic in their action. Due regard must also be paid to the conditions under which the patient lives. Not every one who suffers from psoriasis is able to devote his whole time to the cure of the complaint. Most persons have to gain their living by their own labor, and this often demands their whole time and activity. Under such circumstances, it generally happens that treatment, however rational, fails to remove the disease. Hence, if we can arrange the treatment in such a way as to interfere but little with the ordinary occupation of the patient, and yet (though more slowly) to attain the desired result, we shall certainly receive his thanks. It is just in these cases that skill is required, to combine our remedies and applications so as to suit the circumstances. For example, I have sometimes had patients who in the day were occupied with their business, so that only the night was available for the treatment of the disease by any of the methods above described. I have then ordered 'packings' and frictions with cold water, and inunctions with tar or with Vlemingkx's solution in the evening when the day's work was ended. Other patients, again, affected with psoriasis, have been able to devote an hour or two every morning and evening to the cure of the complaint, and I have then availed myself of this short time to apply one or other of the irritant ointments, such as the *Ung. hydr. deuto-iodidi*" (**97**, Syd. Ed. 2: 19–50).

Having given at great length the views of others, the author will briefly indicate the principles that guide him in the management of this affection.

Believing that the eruption is but the outward expression of certain pre-existing constitutional and diathetic conditions, the rational treatment from this standpoint involves the use of such measures as are capable of combating this predisposition. These have already been considered in connection with the treatment of the Rheumic diathesis, and need not be here repeated. This brings us to the consideration of a few drugs that appear to have an almost specific influence on the eruption itself. Before touching on these, however, it may be stated that the principal indications are to dissipate the eruption and to prevent its return. The best way to fulfil the former is the judicious application of both internal and external remedies, and of the latter the use of internal remedies in connection with a proper dietary and suitable hygiene. The special combination that will, in the author's experience, *most quickly* remove the eruption is the free use of Chrysophanic acid externally, and of phosphorus or arsenic in poisonous doses* internally. It is of course understood that such treatment is not advised. Of the various remedies that have been recommended for the specific treatment of Psoriasis the author's experience is limited to but a comparatively small number. These are :

Arsenic.—To what has been already said concerning this drug, I can add but little. Given in small but gradually increasing doses for a considerable period, or in larger doses for a shorter time, it will probably, in the majority of instances, remove the eruption, provided the patient can take it long enough.† It sometimes, though rarely, aggravates the trouble. If it be used at all, its employment should be thorough, and if a quick cure is desired, the object should be to introduce into the system the greatest possible amount of the drug in the shortest space of time that is consistent with due safeguards against the production of too much reactive irritation. It is of course difficult to determine in advance the appropriate dose for any given case; hence it is best to commence with small doses, increased from day to day until conjunctival or gastric irritation, etc., warn the physician that the limit of "tolerance" has been reached. The dose must then be graduated so as to keep just within this limit until the removal of the lesions is effected.

Copaiba.—The efficacy of this drug in psoriasis was accidentally discovered by HARDY, and personal experience convinces me that it is of service. It is well adapted to hospital use, but cannot, for obvious reasons, be extensively employed in private practice. It may be given in the same doses and manner in which it is used in gonorrhœa, and with the usual precautions against the production of too much gastric, intestinal, or renal irritation.

Cantharides.—The French writers almost unanimously recommend this drug in psoriasis. I have used it to a limited extent, and thus far think well of it. It has appeared to me, however, to be a drug which, like Copaiba, should be classed among the diathetic rather than the specific remedies in psoriasis, acting in virtue of its diuretic properties rather than directly on the skin, and hence adapted to the early rather than to the late stages of treatment.

Dulcamara.—I have seen very decided benefit follow the use of this drug, but am not prepared to give it the high commendation accorded it by many of the older writers, more especially Crichton (p. 51). Possibly I have not yet learned how to use it to the best advantage.

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* By poisonous doses we here mean such doses as will cause marked constitutional disturbance, and perhaps endanger the future welfare of the patient. As examples I will state that I have twice seen Psoriasis disappear as if by magic after a few teaspoonful doses of Fowler's solution which the patients had taken through misunderstanding. I have also known serious consequences follow too large doses of phosphorus.

† I have, at present, a case of psoriasis and one of eczema, in which very moderate doses of arsenic will in a short time produce anasarca with albuminuria.

Phosphorus.—This drug, in doses of from gr. $\frac{1}{100}$ to gr. $\frac{1}{25}$, exerts very distinct influence on Psoriasis. The dangers connected with its use, however, are not to be overlooked. These are the induction of pleuritis and of acute fatty degeneration of the liver: The former I have met with, the latter it has not been my ill-fortune to encounter.

Of the *external* applications that are of service in Psoriasis, the various tars, carbolic acid, and Vlemingkx's solution, together with the various sorts of baths, have been fully considered in the quotation from Hebra. There is little doubt that they will accomplish all that is there claimed for them. One drug, however, of recent introduction, requires special mention:

Chrysophanic acid.—To Balmanno Squire, of London, we are indebted for the use of this agent in Psoriasis. In a five to a ten per cent. ointment, applied once or twice a day, it exerts a remarkable influence on the Psoriasic eruption. The only inconvenience attending its use is the irritation produced by it beyond the limits of its direct application. This sometimes reaches such a degree that prudence induces us to avoid its application to the face or scalp. On other regions it may be used with comparative freedom.

Pyrogallic acid, still more recently introduced, exerts a very energetic influence on Psoriasis. It may be used in ointment of the same strength as the last. It should not, however, be applied to an extensive surface of the body, as there are reasons for believing that it may be absorbed, and exercise an injurious effect.

Besides the drugs above noticed, the following have been recommended:

For internal use.—*Acid. Carbolic.*, 6; *Acid. Nitro-muriatic.*, 9; *Ammon. Carbonas*, 15; *Antimon. Crudum*, 20; *Arsen. Iod.*, 28; *Asafœtida*, 29; *Bals. Gurgun.*, 30; *Calotropis*, 36; *Citrus Limon.*, 45; *Ergota*, 52; *Galium*, 56; *Hydrarg. Iod. Rub.*, 65; *Hydrocotyle Asiatica*, 68; *Iris Versicolor*, 71; *Juniperus*, 73; *Limon.*, 74; *Lithii Benzoas*, 74; *Lithii Bromid.*, 74; *Potassii Carbonas*, 92; *Potassii Iod.*, 95; *Rhus Tox.*, 99; and *Rosmarinus*, 101.

For external use.—*Acid. Acetic.*, 5; *Acid. Carbol.*, 6; *Acid. Hydrocyan.*, 8; *Acid. Salicyl.*, 11; *Acid. Sulphuros.*, 11; *Ammon. Iodid.*, 15; *Argent. Chlorid.*, 20; *Argent. Nitras*, 21; *Calcii Sulphid.*, 35; *Creasotum*, 48; *Hydrargyrum*, 60; *Hydrarg. Chlor. Cor.*, 64; *Hydrarg. Chlor. Mite*, 65; *Hydrarg. Iod. Rub.*, 65; *Hydrarg. Iod. Vir.*, 65; *Mais Guasto*, 75; *Ol. Oryzæ*, 79; *Opium*, 81; *Potass. Sulphid.*, 95; *Sulph. Iod.*, 109; *Tong Pang Chong*, 111, and *Thymol*, 111.

PURPURA.

Definition and description.—Purpura is an affection due to localized effusions of blood into the skin, and is characterized by the sudden appearance of small macules from one-twelfth to one-half inch in diameter on various parts of the surface. A comparatively small number only may be present, or, on the other hand, so many that it would prove tedious to count them. The spots, at the moment of their first appearance, are red, but soon assume a purplish hue. The color is not removable by pressure. After a few days they undergo the changes of color that we are all familiar with in connection with ecchymoses from contusion.

The eruption may be thickly sprinkled over the whole surface, except the face and scalp, which are usually spared. The macules may all appear in a single day, or additions may occur for several successive days. The spots go through their changes and disappear in from one to two weeks. After a variable period a fresh crop may appear, and this may be repeated a number of times.

In some cases hemorrhage from the mucous surfaces takes place, and may be so profuse as to seriously endanger the life of the patient.

In simple Purpura there is, as a rule, a total absence of constitutional symptoms—that is, there is no febrile action either before or after the eruption. There is also absence of pain and itching. The eruption may attack those in a debilitated condition, or those who appear to be in perfect health.

Purpura hemorrhagica, on the other hand, may be preceded by a vague feeling of illness, but without well-defined symptoms. As the disease advances, however, hemorrhages from the nose, mouth, bowels, or bladder may produce serious debility and even prove fatal.

Diagnosis.—The diagnosis of purpura is easy, the only affection with which the inexperienced would be likely to confound it being Scurvy. In Scurvy the gums are swollen and may be ulcerated, and the purple spots are not mere macules but patches of considerable size. In Scurvy there is also swelling of the lower limbs, not a soft œdema, such as occurs in Bright's disease, but a hard, boardy feeling that is hardly met with in any other affection. In Scurvy it is usual also to have more or less debility. The history of the case will also throw light on the diagnosis. Purpura usually comes on without assignable cause, while Scurvy is always the result of improper diet, such as exclusive confinement to salt food, absence of vegetables, etc.

Prognosis.—In simple purpura the prognosis is usually good, but in the hemorrhagic form there is danger of exhaustion and collapse from loss of blood. The effusions may also invade the tissues of the internal organs, and in this way interfere with the performance of vital functions.

Ætiology.—We may frankly say that we do not know the causes that bring about this affection. The disease consists essentiallyin an effusion of blood from ruptured cutaneous capillaries, or possibly to diapedesis of the red corpuscles, without rupture of the vessel. As immediate causes of this condition some have asserted that the blood was thinner than usual, others that the blood was normal, but that the capillaries were weakened. Both of these assigned causes are theoretical and not based on known facts. Various remote causes have also been suggested, as hepatic congestion (Cauty), internal obstruction (Bateman), enlarged spleen (Fuchs), debility of the nervous powers (Wilson), deficient or suppressed menstruation (Cazenave), etc. The last-mentioned cause we have seen exemplified in a case in which the purpura partook of the nature of vicarious menstruation, coming on for several months, at the time of, and instead of the natural flow.

Treatment.—The most varied treatment has been recommended for this affection—for instance, iron in large doses, in order to repair the supposed deficiencies in the blood: tannin, gallic acid, the mineral acids, etc., under the idea that they would act as astringents, and many other methods equally irrational and useless.

More recently, however, it has been discovered that Ergot possesses the most undoubted influence over this affection, and if given sufficiently early and in full doses is capable of bringing it to an early termination. It may be administered by the mouth or hypodermically.

The following drugs may also be referred to: *Acidum Salicylicum*, 10; *Ferri Arsenias*, 54; *Krameria*, 72; *Potassii Nitras*, 95; *Rumex Acetosa*, 101; *Terebinthina*, 110.

ROSACEA.

SYN.: Acne rosacea; Gutta rosea.

Definition and description.—Rosacea, at its commencement, is characterized by the appearance of small reddened macules, or a diffused, reddened patch on the nose or cheeks, or both. The redness gradually extends until after some months, or perhaps years, a considerable part of the face may be involved. The principal characteristic at this stage is a diffused superficial redness without much, if any, infiltration. In this condition the affection may persist indefinitely, and perhaps never go beyond it. More frequently, however, it passes on to the second stage, characterized by the appearance of minute blood-vessels. As the disease progresses, these vessels increase in size, both as to length and breadth, and frequently become tortuous and varicose. At the same time the integument itself thickens, and occasional pustules arise. These are generally seated in the sebaceous glands, and are in reality an acne secondary to the Rosacea. They are rarely, however, a prominent feature of the affection, and should be regarded as accidental complications due to the extension of the morbid action from the surrounding tissues to the glands. This second, or varicose, stage of Rosacea is like the first, of gradual development, often requiring years, but still progressing with slow but steady step. In some cases the affection halts in this stage; in others the morbid action continues, and is accompanied with infiltration of the cutaneous tissues. This may result in very great thickening of the integument, and in severe cases lead to decided hypertrophy and deformation of the nose, which is the part most liable to be the subject of this form of Rosacea. This thickening and hypertrophy may be uniform, or, more frequently, somewhat irregular, budding out in different places into rounded elevations or tubercles. These are not proper acne tubercles, but projections of the general integumentary tissues, including, of course, many sebaceous glands. The large and tortuous veins which characterized the second stage are also present in this, but the red color, so prominent in the earlier periods of the disease, in many cases disappears in great measure as the hypertrophic changes advance. Rosacea may occur at any period of adult life, but, as a rule, does not become developed to any great extent until middle age or later.

Diagnosis.—The diagnosis of Rosacea is not difficult. The only affections with which it might by chance be confounded are simple erythema, erythematous eczema, and erythematous lupus. From these it can, as a rule, be readily distinguished by considering the history of the case, and comparing the lesions present with those that accompany the affections just named.

Prognosis.—In general the prognosis is favorable, that is, most cases can be greatly improved, and many of them permanently cured. The earlier judicious treatment is adopted, the speedier and more certain the relief. Advanced cases that have reached the second and third stages, however, can be greatly benefited.

Etiology.—Rosacea is a reflex affection, and depends, in the majority of cases, on perfectly recognizable causes. These reside, for the most part, in derangements of the alimentary canal, liver, uterus, or ovaries. In considering them it must be remembered that any cause capable of congesting the facial integument, if the cause is repeatedly or continuously in action, is liable to induce Rosacea. Thus, frequent alcoholic stimulation or high living will induce this condition in some. In others, hepatic torpor, while in women it is well known that uterine disturbance greatly influences the facial circulation. The influence of uterine disturbance on the production of Rosacea is denied by some writers, who claim that in the majority of cases questioning the patient fails to elicit any evidence in favor of this view. The fact is that these gentlemen either meet with an exceptional class of cases, or they do not examine them with sufficient persistence and thoroughness.

Hebra's remarks on this point are so judicious and so in harmony with my own experience, that I quote them in full. He says: "Researches, made with care, have demonstrated that women, young or old, who suffer from Acne Rosacea, usually suffer from menstrual disorder, and of the exact nature of the trouble we are often obliged to remain in ignorance, in consequence of the frequent impossibility, or at least difficulty, of making a direct examination of unmarried women, or of obtaining from them a history of any value. I will simply recall, as example, how rare it is to obtain satisfactory replies when you ask a young woman if her menstruation is regular or not, whether it is scanty or profuse, or whether painful or not. According to my experience, she will at first reply that she is all right in that respect, while later, if she is questioned with some persistence, she will admit that it is entirely otherwise. This is quite natural, and should be attributed rather to the manner in which the questions are put, than to a desire on the part of the patient to deceive.

"A question asked in general terms presupposes, if a correct reply is to be given, that the patient herself knows exactly how and when the menstrual epoch should appear, how long the flow should last, and what should be the proper intervals. This is evidently too much to expect of a young girl. The best way is to ask direct and precise questions—for instance, 'When were you unwell last?' 'How many days did the flow continue?' 'After how many days does it usually return?' 'Is it preceded or accompanied with pain?' 'Do you suffer from the whites before, after, or during the interval?' 'What is the quantity, nature, and color of the discharge?' 'When do you next expect to be unwell?' etc. The result of an inquiry pursued in these terms will demonstrate how imperfectly acquainted the generality of women are with these matters, but it is the only means by which we can hope to obtain the information we need, and which is so indispensable to their welfare." The foregoing remarks may well be considered by the physician in connection with many other ailments besides the one that now concerns us.

In many cases of Rosacea, however, we will be unable to satisfy ourselves of the presence of any of the causes above mentioned. The patients may be temperate in their habits and not complain of any other bodily discomfort whatever.

Treatment.—The first step in the management of Rosacea is to ascertain the exciting cause. This done, the next is to remove it, if possible. If the patient is dyspeptic, or suffers from habitual constipation, these conditions must be relieved by measures that need not be here considered.

If the liver seems to be at fault, mild cholagogues, in small doses and long continued, are often of decided service. If spirituous indulgence appear to be the principal cause, it is of course necessary that this should be corrected. If uterine disorder appears to be at the root of the trouble this sometimes requires the special arts of the gynecologist for its removal, at other times may be vastly benefited by a little simple medication. For instance, an amenorrhœa, due to anæmia, may sometimes be removed by the judicious use of iron, sometimes by arsenic; if malarial complications are present, the same drugs, or quinine or eupatorium, may be more advisable. If neither anæmia nor malaria be present, the amenorrhœa may often be relieved by direct uterine excitants. Besides those more generally employed, the writer has used to advantage the less known Caulophyllum and the Leonurus cardiaca. Electricity also should be borne in mind. Dysmenorrhœa, when not due to a mechanical cause, is, if of ovarian origin, frequently controlled by Pulsatilla; if the pains are uterine, Viburnum opulus may be efficient.

These various etiological factors having been provided for, attention may be directed to the local cutaneous difficulty. The use of amyl nitrite in this connection has been considered elsewhere (pp. 16 and 17), and what was there said need not be repeated. I may further add that I have, in a number of instances, vastly improved and sometimes cured Rosacea by internal treatment alone, and without recourse to any external applications whatever. In many cases, however, this can hardly be done, or at least not so quickly as by the judicious use of topical measures in addition. The selection of these, however, will depend in great measure on the stage and condition of the eruption at the time it comes under notice. If acne be present as a complicating lesion, this should be first disposed of in the way indicated elsewhere. This accomplished, we find ourselves face to face with, in the first stage, a chronic congestion of the skin. Local depletion, by scarification, and hot fomentations are of special benefit, as also the method of Hebra, which consists in the use of green-soap or alkaline soap-spirit, followed by lotions containing sulphur. In the second stage, the first thought should be directed to getting rid of the tortuous and varicose veins. This may be most conveniently done by using a fine-pointed galvano-cautery, the fine point of a Paquelin cautery, or an ordinary needle, heated to redness, or by electrolysis, as proposed by HARDAWAY. Scarification and the soap treatment should follow.

In the third or hypertrophic stage, when the skin has acquired an enormous increase in thickness and extent, it may be reduced by excising portions of it, or by electrolysis, or by puncturing it freely with the cauterizing point of either the galvano- or Paquelin cautery. The writer has employed all of these methods, and in addition has obtained very decided shrinkage of hypertrophic noses by the use of the galvanic current. CHEADLE (**162**, July, '74) has obtained good results from the use of the faradic current. By the use of the foregoing means, the great majority, if not all cases of Rosacea, may be cured or greatly benefited, and the disease can no longer be considered as it formerly was, one of the opprobria of the dermatological art.

The following drugs should also be considered: *Armoracia*, 22; *Ben-*

zoin, 32; *Bismuthi subnitras*, 33; *Ergota*, 52; *Hydrarg. Chlor. Corros.*, 64; *Hydrarg. Nitras*, 66; *Plumbi Oleas*, 89; *Potassii Acetas*, 90; *Silica*, 105; and *Sulphuris Iodidum*, 109.

SARCOMA.

SYN.: Fibrome embryonnaire.

Definition and description.—Sarcoma of the skin is a disease characterized by the development of one or more softish tumors of a malignant character. The tumors may be pigmented or non-pigmented. The literature of the subject is exceedingly scanty, due either to the intrinsic rarity of the affection, as asserted by Köbner (**111**, '69, 369), or to the fact that cases have not been diagnosticated and recorded as such. Personally, I have met with two cases of multiple pigmented sarcoma, both of which terminated fatally, and have examined, microscopically, specimens from a third fatal case of the same, which I had not an opportunity of seeing during life; one case of solitary pigment-sarcoma (referred to on page 229) and three cases of solitary non-pigmented examples of the disease, two of which, examined after excision, proved to be of the small round-celled variety of the histologists. The location first occupied by this growth varies in different cases. Of the four cases of multiple sarcomata, in one the first lesion appeared on the foot,* in another on the face, and in the other two the history is defective on this point. The solitary pigment sarcoma was on the left forearm, and of the solitary non-pigmented sarcomata, two were at the nape of the neck, and one on the left temporal region.

In all these cases the tumors were softish, in this respect presenting a striking contrast to carcinomatous growths, and in the solitary forms were characterized by a decided tendency to hemorrhage on the slightest provocation. "If you look at it, it will bleed," as one patient remarked.

The growths increase in size with varying rapidity, and, after a time, ulcerate—spontaneous hemorrhages (in the solitary forms at least) being of frequent occurrence.† In the multiple pigmented form, the disease may extend to internal organs, and has always, so far as I am aware, terminated fatally.

A single pigmented tumor, however, may exist for a long time—years, perhaps, before the disease becomes generalized. The age at which the disease occurs varies from childhood to advanced life.

Diagnosis.—The consistence of the growth and its tendency to hemorrhage suffice to distinguish it from epithelioma, the only affection with which it is likely to be confounded, and which it resembles only in the single feature of malignancy and liability to return after removal.

Prognosis.—The prognosis is always grave, both in consequence of the tendency to relapse *in situ*, and to secondary developments elsewhere, not only on the skin, but in the deeper organs.

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* Kaposi states (97, 2: 473) that they *always* occur first in this region, which is on a par with his many other dogmatic statements (see p. 176 of this book). Wigglesworth reports (110, '76, 98) a case in which the first lesions were on the abdomen.

† In the cases that I examined microscopically, the growth consisted mainly of small cells and large blood-vessels.

Etiology.—The causes that give rise to Sarcoma are unknown.

Treatment.—In multiple Sarcomata treatment is of little avail, excision of all the tumors being probably impracticable. Attention to the general health, etc., may tend to delay the fatal issue. In cases of solitary sarcoma, free excision should be practised as early as possible. Before operating, preparation should be made for the control of hemorrhage which may be excessive. In the solitary pigment-sarcoma of the forearm, already referred to, a wide margin of surrounding skin was removed and the hemorrhage was not great. In a small, cherry-sized Sarcoma at the back of the neck of a child the hemorrhage promised to be free, but the growth was rapidly removed, and the actual cautery instantly applied and kept in contact for about fifteen seconds. In a solitary Sarcoma at the nape of the neck of a young man, the oval wound, after excision, measured about three-fourths of an inch in its long diameter, and required nine ligatures and firm pressure to control the bleeding. In the Sarcoma of the temporal region the tumor measured 75 mm. (three inches) in both its horizontal and vertical diameters, and its circumference was 170 mm. (nearly seven inches), the tumor being of irregular shape and more pointed below than above. In the operation I was assisted by my friend DR. FOX and others. In this case the hemorrhage was frightful, but finally controlled by ligature, the actual cautery, chloride of zinc and pressure. I mention these particulars to warn the physician not to meddle with sarcomata of any size, unless due preparation has been made against hemorrhage. On the first of these cases I operated at my office, on the second at my clinic at the University, on the third at the Charity Hospital, and on the fourth at the clinic. Besides these strictly skin-sarcomata, I have encountered two quite large tumors, one on the left thigh, and fifteen inches in circumference, pronounced by a microscopist to be osteo-sarcoma, and one on the right breast, twenty-one inches around, pronounced a myxo-sarcoma. These cases were in the surgical wards at Bellevue Hospital, and under the care of PROF. STEPHEN SMITH, at whose request I removed them with the galvano-cautery loop, with the loss of but very little blood, although both tumors were highly vascular. The galvano-cautery then affords us a means of removing these tumors, where their form or position will permit, without risk of much hemorrhage. With reference to these two cases it may be stated that the operations were not undertaken with the expectation of permanent benefit, as that was believed to be out of question by any procedure whatever, but, simply with the view of affording temporary relief.

SCABIES.

Definition and description.—Scabies is a zoöparasitic disease, produced by the lodgment and increase of certain minute insects on and under the skin. It is usually characterized by the appearance of little transparent, isolated, non-umbilicated vesicles upon the skin, especially between the fingers and on other parts of the hands. The development of these vesicles is accompanied with itching, usually worse at night. The pruritus leads to scratching, and this scratching of the diseased parts and scratching or handling of other portions of the integument, leads to the extension of the disease to them, and we find that, as a rule, the affection next invades the penis in the male, the breasts in women, and the feet in children, from which parts it may extend to all other portions of the surface—the anterior, however, in preference to the posterior. The head and face are rarely if ever affected.

After a few days, in some cases, later in others, additional phenomena are presented. These, as a rule, are papular, and pustular forms of eczema, in those predisposed to this affection, together with scratch-marks and rather large, isolated, and commonly umbilicated pustules. In those possessing a decidedly pyogenic constitution, furuncles and abscesses may appear. In other words, the eruption in advanced cases is frequently polymorphous.

These are the lesions visible on a cursory examination, but none of them are absolutely diagnostic, although the vesicles first alluded to are not, so far as I am aware, met with in any other affection. There is, however, another lesion that is pathognomonic, and which, if detected, leaves no doubt as to the nature of the affection. I allude to what is called the *cuniculus*, or burrow, made by the insect that causes the disease. This lesion is a fine line, more frequently curved than straight, and of a whitish or grayish color, sometimes interrupted with black points. The line is usually from one-fourth to one-half inch in length, and can be detected only by close inspection, but more easily with the aid of a lens. It is usually found near the vesicles, sometimes upon their surface, but occasionally is at a distance from them.

Pruritus is almost an invariable accompaniment, and may be mild, but is usually worse at night, when the patient is warm in bed.

Etiology.—Scabies is caused by the presence of an insect called the *Acarus scabiei*, or *Sarcoptis hominis.*

This proposition, which I presume none would dispute at the present day, in reality touches on a curious phase in medical history, exhibiting, as it does, the intense conservatism of the medical profession, and its, sometimes, dogged resistance to the reception of new truths. The connection between Scabies and the insect just referred to, was noticed by AVENZOAR in the twelfth century. He speaks of the affection as due to small animals which "*sunt pedicilli subter manum, crurum et pedum cutem serpentes, et pustulas ibidem excitantes, aquâ plenas ; tam parva animalcula, quam vix visu discerni valeant.** This statement, made nearly 700 years ago, and reiterated by other careful observers, was not accepted by the mass of the profession as true, until within the last fifty years. Turner,† the author of the first English work devoted to skin diseases, alludes to the matter as follows: "Of Lice there are reckoned four Kinds, troublesome to the Bodies of Men." After speaking of the head-louse, body-louse, and crab-louse, he says the fourth kind "are those generated (according to some) under the Cuticle, being found on the Hands and Feet, of a round Form like the small Eggs of Butter-Flyes, some of them so minute as to escape the Sight, altho' by their creeping under the Scarf-Skin they often Stir up a most intolerable Itching, and sometimes break forth and discover themselves, altho' for the most Part they lye hid and conceal themselves; Some Authors mention them and treat of them as I suppose, under the names of *Acari*, *Cyrones* and *Pediculi.*"

BONOMIO also, in 1687, announced the existence of these insects. Not having access to the original statements of BONOMIO, I am forced to quote the account of his discoveries from a later writer.* I do so the more willingly as the description, for accuracy and vividness, could hardly be improved on at the present day. Baker says: "The Microscope has discovered, what without it could scarce have been imagined, that the Distemper we call the Itch, is owing to little insects under the *Cuticula*, whose continual Bitings cause an ouzing of Serum from the *Cutis*, and produce those Pustules or watry Bladders whereby this Disease is known. This was found out by Dr. Bonomio, who observing that itchy People frequently pull out of their scabby Skin little Bladders of Water, with the Point of a Pin, and crack them on their Nails like Fleas, he determined to examine what these Bladders might really be. Wherefore picking out with a fine Needle a little Pustule from a Place scabbed over, or where there was a severe Itching, he squeezed a thin matter from it and perceived a very small white Globule scarcely discernable, which, applying to the Microscope, he found to be a very *minute Animal*, in Shape resembling a Tortoise, of a whitish Colour, but darker on the Back than elsewhere, with long and thick Hairs issuing from it, very nimble in its motion, having six Legs,† and two little Horns.

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* I quote from a Latin translation of his work.

† A Treatise of Diseases Incident to the Skin, p. 159. London, 1714.

"This Experiment was repeated on itchy Persons of all Ages, Sexes and Complexions, and at all Seasons of the Year, and he constantly found the same *Animalcules* in most of the watery Pustules; and though by reason of their Minuteness and Colour (which is the same as that of the Skin) it is difficult to discern these Creatures on the Surface of the Body, yet he sometimes saw them upon the joints of the Fingers in the little Furrows of the *Cuticula*, where they first begin to enter with their sharp Heads, gnawing and working in their Bodies, till they are got quite under the *Cuticula*, where they burrow from Place to Place, cause a troublesome and grievous Itching, and force the infected Person to scratch, which only serves to increase the malady; for, by breaking the little Pustules, and some small Blood-vessels, Scabs, crusty Sores, and such like foul Symptoms ensue; whilst the mischievous *Animalcules* escape the nails by their minuteness, and disperse themselves the farther."

The acarus, though barely visible to the naked eye, may be readily recognized under the microscope as a minute insect, from one-fortieth to one-fiftieth of an inch in length. The female is larger than the male, and is provided with eight legs. The anterior four are provided with suckers and numerous hairs, the posterior four have no suckers, but to each is attached a specially long hair, with several shorter ones. Upon the belly are short, triangular spines, with their apices directed backward. The male also has eight legs, the anterior four and the posterior pair with suckers, the other pair with long hairs as in the female; the triangular spines are absent. The young acarus has but six legs, four anteriorly and two posteriorly (Figs. 27 and 28).

The *Cuniculus*, or acarian burrow, arises in the following manner: A pregnant female, having been brought in contact with the skin, immediately penetrates the epidermis, and burrows along underneath it, each day laying an egg or two, until a dozen or more have been deposited. The conformation of her body is such that she cannot readily back out of the burrow, the triangular spines preventing, but is compelled to advance, and usually does so in a curved direction, leaving in her track a line of eggs behind her, interspersed with little points of black excrement.

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* Baker: The Microscope Made Easy, 4th ed. London, 1754.

† The adult Acarus has eight legs, the young have six.—H. G. P.

This is shown in Fig. 29.

After her ovulation is complete, she remains at the extremity of the burrow and dies, without again reaching the surface. Her decomposed remains cause irritation and may give rise to a pustule. In a few days the eggs hatch, and the young acari work their way to the surface. Here, after proper development, they copulate, and the impregnated females dive down under the epidermis to breed a fresh colony, and in this way prolong the disease indefinitely. The female acarus may sometimes be extracted from the cuniculus on the point of a needle. The male insect never burrows, but remains upon the surface. It is, however, but rarely detected.

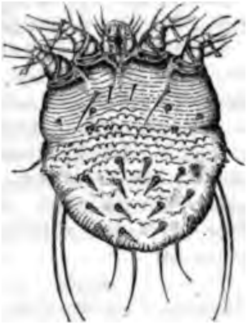

FIG. 27.—Female acarus. (FÜRSTENBERG.)

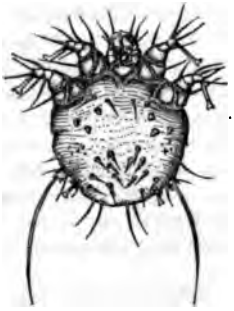

FIG. 28.—Male acarus. (FÜRSTENBERG.)

Diagnosis.—The practised eye is, in the majority of cases, able to diagnosticate this disease at a glance, the general aspect of the eruption being sufficient. By one not very familiar with the subject the following points should be borne in mind: In advanced cases the eruption is usually polymorphous, and consists in the special lesions of scabies, namely, the vesicles and burrows, together with secondary lesions consisting of papules, pustules, crusts, scratch-marks, etc., due to the irritation produced by the insect. Large umbilicated pustules about the wrists are a

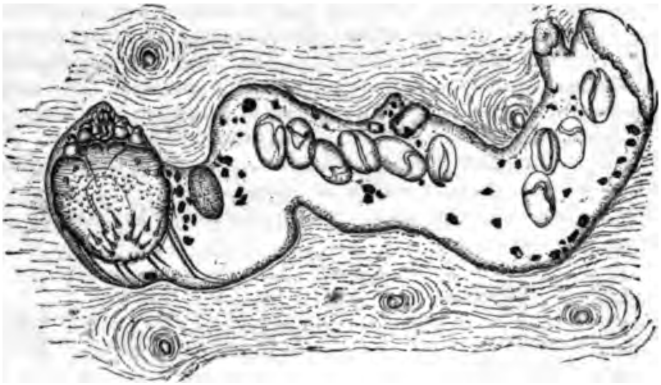

FIG. 29.—Cuniculus, with acarus, eggs, etc. (FÜRSTENBERG.)

frequent and valuable diagnostic sign. The penis in boys and men frequently exhibit papules, more rarely vesicles, while the breasts in women are the parts specially liable to be affected. The anterior aspect of the body is more frequently and profusely affected than the posterior, and the head is almost always exempt. The history of contagion, and the presence of the disease in several members of a family is also of importance in connection with diagnosis.

Prognosis.—This is always good, as the disease can be readily cured.

Treatment.—The French method of treatment is, of all that have been proposed, the most thorough and effective. It may be carried out as follows: The. patient is first placed in a warm bath for half an hour, in order to thoroughly macerate and soften the epidermis. He is then vigorously rubbed with soft soap, not only on the parts that seem to be specially affected, but all over the surface, except the head. A soft scrubbing brush adds to the efficiency of this part of the treatment, twenty minutes or a half hour being occupied in accomplishing it. The soap having been washed off, the skin is thoroughly dried, and a sufficiency of ordinary sulphur ointment, or, better, the following

	Grams.	
℞. Potassii iodidi	4.	ʒ j.
Ungt. Sulphuris	30.	℥ j.
M.		

is rubbed all over the body in the most careful manner, special attention being devoted to the regions most affected. The patient is then put to bed, where he remains until the following morning. A warm bath, to cleanse the skin of the sulphur, completes the operation, and in ninety-nine cases out of a hundred the parasite is destroyed, the Scabies is cured, and the patient has only to recover from the secondary eruptions and the effects of the somewhat severe and painful course through which he has been put. Emollient applications are now usually indicated.

If the patient resume the clothing that he wore previous to treatment, he will, in all probability, recontract the disease. It must therefore be destroyed, or thoroughly disinfected. This may be accomplished by thorough baking in an oven, or fumigation with sulphur. The bedclothes that have been in use prior to treatment should also be disinfected. There is but one objection to the treatment, and that is its severity. This, of course, may be diminished to any desired extent, but if this is done a single operation will not usually suffice to effect a cure.

Instead of the ointment above given, the following may be used, as recommended by HEBRA:

	Grams.	
℞. Sulph. Sublimat., Ol. Cadini	āā 180.	℥ vi.
Cretæ prepar	120.	℥ iv.
Saponis Viridis, Unguenti	āā 500.	lb. j.
M.		

A method devised by VLEMINGKX, and employed in the Belgian army, is also very effective. The patient is first to be placed in a bath, in which he is rubbed all over vigorously for half an hour with pieces of coarse flannel and soft soap. After the soap has been well rubbed in, the patient is left for another half-hour in the bath. During the third half-hour he is again rubbed all over, and no less forcibly than before, with pieces of flannel, which this time are dipped in "Vlemingkx's solution" (see Formulary). The fourth half-hour is again passed in the bath, from which he emerges probably cured of the scabies, but with his skin very sore and looking, perhaps, worse than before he went in.

The objection to this treatment is the same as to the method first detailed, namely, its severity and its liability to induce an artificial eruption that may be a week or two in disappearing. The treatment is hardly to be advised in children and in persons of delicate skin. Instead, it is better to employ milder measures, even if the period of treatment is prolonged. To this end ANDERSON recommends inunctions with an ointment something like the following:

		Grams.	
℞.	Sulph. præcip.,		
	Ol. Cadini	āā 12.	ʒ iij.
	Glycerit. Amyli	24.	ʒ vi.
	Ungt. benzoini	48.	℥ iss.
M.			

Still milder is an ointment composed of one part of liquid Styrax to two parts of simple ointment, or the Balsam of Peru diluted with four or five parts of lard.

In addition to the foregoing the following drugs have been recommended: *Acidum Aceticum*, 5; *Acidum Sulphuricum*, 11; *Cimicifuga*, 42; *Kamala*, 71; *Manganesii Oxid. Nig.*, 75; and *Petroleum*, 83.

SCLERIASIS.

Definition and description.—Of this rare affection I have been enabled to watch, for any length of time, a single case only; but the history of this one exhibits so typically a definite and distinct form of disease, that I give it in full:*

Daniel G., a native of Ireland, aged forty-nine years, and a blacksmith by occupation, came under the care of DR. E. G. JANEWAY, in the early part of 1869, suffering from emphysema of the lungs and chronic bronchitis. He remained under the care of Dr. J., for more than a year, without presenting any novel or peculiar features; but about the 1st of March, 1870, he noticed a stiffness on moving his neck. This was soon followed by a similar condition affecting the arms, back, chest, and abdominal region. The affection reached its height in about ten days, and then remained stationary for about six weeks after its first appearance. On examination I found the integument of the parts above mentioned to be firmly adherent to the tissues beneath. It was impossible to lift or pinch it up in folds, or to make it glide over the underlying connective tissue. The patient was free from pain, and only complained of the inconvenience that arose from being encased in an inelastic covering that impeded the use of his arms, and compelled him to abandon his occupation. With the exception of his pulmonary difficulty, his organs and functions were in a normal condition. Careful inquiry failed to throw any light on the determining cause of the attack, except, perhaps, frequent and sudden changes of temperature; for he stated that when overheated at the forge, he sometimes stood in a draught to cool himself.

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* This case was first published by me in the New York Medical Gazette, June 24, 1871.

The patient was placed on small doses of quinine, in addition to the remedies prescribed by Dr. J. for his pulmonary difficulty. The affection gradually subsided, and in three months the scleriasis had entirely disappeared.

The case here presented is by no means a unique one in cutaneous literature, as many others have been reported; but the reporters of them and dermatological writers generally, have confounded them with and reported them as cases of a totally distinct affection, namely the one to which the name of Scleroderma is now almost universally given. The differences between the two will be pointed out later.

The principal characteristics of Scleriasis are the "hide-bound" condition of the skin, and the rapid invasion of a large portion (in the case given, more than one-half) of the integument, and the spontaneous recovery.*

Diagnosis.—The only affection with which this one can be confounded is Scleroderma; the differential diagnosis between them will be given in connection with the latter disease.

Prognosis.—Usually good.

Ætiology.—Unknown.

Treatment.—I do not know that any treatment has influenced the course of the disease, but if another case were to come under my care I should probably employ the Turkish bath, with plenty of kneading and shampooing, together with electricity.

SCLERODERMA.

SYN.: Sclérème; Scleriasis.

Definition and description.—The peculiarities of this affection are shown in the history of the following case.†

Johanna A., German, aged twenty-nine, came under my care December 20, 1870, with the following history: Two years and a half before, she discovered that the skin behind the left malleolus was hard and unyielding, like the calloused skin of a workingman's hand. This condition continued, and began to spread up the outer side of the leg in spite of various treatment. She occasionally suffered from pain in the affected limb, but the chief complaint was on account of the impaired mobility and strength of the member. There had been no appearance of the morbid condition upon any other part of the body.‡ The general health was good.

On examination, I found that the skin behind the malleolus was hard, white, and its outermost layers disposed to loosen and curl up; these, however, could not be removed without inflicting great pain. The skin was firmly bound down to the subjacent tissues and tightly stretched over the malleolus.

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* I do not believe the quinine had anything to do with the return to health.

† Published in the New York Medical Gazette, June 24, 1871.

‡ Two or three years ago I again saw her. In the meantime the disease had appeared in much the same way on the right leg.

Above the ankle, the skin continued to present a sclerosed character, but appeared to be thicker than normal. As it was immovably attached, however, to the tissues beneath, its exact thickness could not be estimated. This condition extended to the upper third of the leg, and occupied the greater portion of its exterior and posterior aspects. The surface was somewhat heightened in color, and presented a slight tendency to exfoliation of the epidermis. Sensation tested by the æsthesiometer indicated equal tactility as compared with corresponding points upon the other leg, but there was increased sensitiveness to pain on the affected parts of the limb. The surface temperature of the sclerosed portion was much lower than on corresponding points of the right leg. Four and a half inches above the ankle, the left leg measured seven and a half inches in circumference, and the right leg eight inches.

The foregoing case exhibits strongly contrasting characteristics, as compared with the case of scleriasis previously given. In regard to scleroderma generally, it may be stated that it occurs on almost every part of the body, having been observed on the neck, face, upper part of the neck, upper and lower extremities and elsewhere. It commences undoubtedly, though this has not been clearly determined, by a circumscribed infiltration of the skin and subcutaneous tissue.* The part affected is slightly elevated, and the skin of a brownish red color, with a very slight tendency to desquamation.

On touching the part it conveys to the finger a sensation of hardness, and the skin is found to be cemented to the subcutaneous tissue, and the whole tightly bound down to the muscles, or to the bones if they are near the surface. If we attempt to pinch up the skin into folds, the effort will be as futile as if we tried to pinch up the paint from a board. The surface temperature is lowered.

As the lesion gradually advances, the portions first affected undergo a change. The elevation subsides and gives place to depression, the heightened color disappears, and is replaced, first by a normal, later by a paler hue, and lastly by a glistening white. The tightness of the skin, its close adherence to the underlying tissues, and its absolute immobility become even more striking than in the early stage. The early hyperplasia is followed by aplasia. Sclerosed patches may appear upon several parts, and by gradual extension may involve a very large portion of the surface.

Diagnosis.—The hide-bound condition above described occurs only in Scleroderma and Scleriasis. In the former of these, the affection commences by one or more limited patches, which very slowly increase in size, months or years elapsing before any great extent of surface is involved. In the latter the invasion is rapid, one to two weeks sufficing to implicate larger portions of the skin. In Scleroderma the parts affected ultimately become atrophied, if the patient does not sooner die. In Scleriasis, the skin is left intact when the disease passes off. In Scleroderma there is no tendency to spontaneous recovery. The reverse is the case in Scleriasis.

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* I am not aware that any cases of scleroderma have been seen at the very inception of the disease, and we are obliged to judge of the conditions then present, by observations at the advancing margin of the lesion.

In Scleroderma, treatment influences the affection favorably. In Scleriasis I do not *know* that this is the case.

Prognosis.—When limited in extent, Scleroderma does not appear to be specially prejudicial to life or health, but when extensive may be associated with visceral or other internal changes capable of inducing a fatal result.

Treatment.—The treatment adopted in the case that came under my care in 1870, was reported in the *Medical Gazette* in 1871, as follows: Treatment was commenced on the 20th of December, by the application of the positive reophore of a constant current (galvanic battery) to the upper part of the left leg, and the negative was slowly moved over the affected parts. The applications were repeated on alternate days, and lasted from five to ten minutes at each sitting. Perceptible improvement was manifest after the fifth or sixth application. Improvement continued, and the patient was presented at the January and February (1871) meetings of the New York Dermatological Society. By the middle of March the skin above the malleolus had resumed its normal aspect, and was freely movable upon the cellular tissue. The portion which lay immediately over the malleolus was also freely movable over the bone, and its cicatricial appearance was somewhat modified, having lost, to some extent, its dead-white color. Considering the dermic condition substantially well, faradization of the muscles was commenced. This was continued for a few days only, as the patient felt herself so much recovered that she did not deem it worth while to pursue treatment further.* Since this case was reported, I have heard of several cases of Scleroderma treated in this country by means of electricity with varied success. More recently, **Armaingaud** † reports the successful use of galvanism in Scleroderma, and adds that "the result merits special mention, as the disease is usually rebellious to all medication, especially when of long standing, and the idea of applying electricity does not appear to have entered the minds of any one until now; not only have I failed to find mention of it in literature, but no reference to this method of treatment is made in the interesting clinical lectures of **Prof. Hardy** delivered at the Necker Hospital in 1877.

Hebra recommends tonic constitutional treatment.

Duhring (**72**, 364) recommends iron, arsenic, and cod-liver oil, together with the employment of baths and stimulating frictions in the form of liniments and ointments.

SCROFULODERMA PHLEGMONOSUM.

Syn.: Scrofulide phlegmoneuse.

Definition and description.—This affection occurs almost always on the face. I do not recollect having seen it elsewhere. It commences with a little tumor taking its rise in the corium. The tumor usually has an oval form, and gradually increases in size, reaching at length that of an almond, or a little larger. The skin covering the tumor presents a violet, reddish, or livid hue. Little by little the tumor softens, and the skin becomes thinner and thinner, until at last it breaks, giving exit to an ill-conditioned scrofulous pus. A crust forms over the opening, damming up the fluid, which, after a time, breaks out anew at the same or at some other point. This process continues until several openings are made, which uniting, form an ulceration of greater or less extent, and possessing the usual scrofulous characters. These abscesses may be single or multiple, and their number is variable. This condition of affairs may progress for months or years before final cicatrization occurs. The scar, at first violaceous, ultimately becomes white, irregular, and reticulate. In some cases the abscess does not open, but the pus is absorbed without the occurrence of ulceration; but even in these a violet spot remains for a long time, to be ultimately followed by a depressed and puckered scar. Successive crops may prolong the affection for years.

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* It is proper to state that, unknown to me at the time, **Fieber** had reported a case (**177**, Nov. 26, '70), antedating my own some months, that was likewise improved by electricity.

† Sur un cas de sclérodermie, etc. Paris, 1878.

Diagnosis.—This form of disease possesses such well-marked characteristics, that it ought never to be mistaken for abscesses occurring in the subcutaneous connective tissue or in the glands. As a rule, other plain indications of the scrofulous diathesis are manifest.

Prognosis.—The prognosis will depend on the promptness with which judicious treatment is undertaken. If left entirely alone the ulcerations will ultimately heal, but not until after the lapse of many months, and considerable scarring is the inevitable result. If, however, the lesion be treated promptly and properly, a much better result may be obtained.

Etiology.—We can say nothing on this point other than that the affection is clearly one of the manifestations of the scrofulous diathesis. The special causes of its production are unknown.

Treatment.—First and foremost, hygienic and constitutional treatment should be considered. Cod-liver oil, Iodine, Iodide of Iron, in fact, the entire *Armamentarium anti-strumarium* may be brought into play. In addition to the remedies of this class in common use, I have employed, to advantage, the *Helianthemum Canadense* (tincture from the fresh plant), and would suggest for trial, on NEGRIER's recommendation, the *Juglans regia* * (p. 72), and on SHOEMAKER's recommendation the Chlorate of Potassium (143, June 5, '80, 629).

Local treatment, however, is not to be neglected. If the nodules have not yet softened, they may sometimes be made to disappear by the use of *Ungt. Iodinii,* or *Ungt. Potassii Iodidi.* If they have already softened, and contain pus, remove this by aspiration with a hypodermic syringe; inject a few drops of tincture of iodine, and apply pressure. If this fails, lay open the abscess freely, scrape its cheesy walls with the dermal curette, and apply tincture of Iodine, Carbolic acid, *Liq. Hydrarg. Nitratis,* or *Ungt. Hydrarg. Biniod.* of one-half or one-quarter the present officinal strength. An application of one of these may be sufficient to induce the formation of laudable pus, after which simple applications should be employed, so long as matters proceed favorably. If stimulation is again needed it should be employed. Instead of the drugs mentioned, the actual cautery, after scraping, may be employed. This has, on the whole, given me the best results. The affection requires energetic local treatment, and the sooner it is undertaken the less will be the amount of subsequent scarring.

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* I have failed to derive benefit from the use of *Juglans cinerea*—perhaps the preparation was not a good one.

SEBORRHŒA.

SYN.: Stearrhœa; Acne fluenta.

Definition and description.—Seborrhœa is a functional affection of the sebaceous glands, characterized by an excessive formation and outpouring of usually somewhat altered sebaceous matter. The glands most frequently affected are those of the nose, cheeks, forehead, and scalp. From these the thin oily sebum may flow in abnormal quantity, and give to the skin a greasy, unctious, and shiny aspect, and prove a convenient trap for all the dust and dirt that may be floating in the atmosphere. If the fingers be passed over the affected parts, they will take up a considerable quantity of the secretion, and if a piece of paper or linen be applied, it is readily stained. Sometimes, when the secretion is abundant, it loses its watery parts by evaporation, and dries upon the surface into thin, greasy-looking scales, which must not, however, be mistaken for those of pityriasis. These scales are sometimes quite adherent, being glued fast, as it were, to the skin immediately surrounding the mouths of the sebaceous follicles. The affection is most frequent in young persons at and after puberty, and in women about the time of the menopause. A certain amount of sebaceous exudation is normal and useful, as it tends to keep the skin soft and pliant. Under these circumstances, however, it does not exist in sufficient quantity to be recognized on ordinary and cursory inspection. It is only when sufficiently abundant to attract the attention of the patient or of others, that it may be fairly called a disease. It frequently lasts, when untreated, for years.

Varieties.—Two varieties are commonly recognized by authors, namely, *Seborrhœa oleasa* and *S. sicca*, the difference between them being due to differences in character of the secretion, which in the former is more oily, and usually more or less completely removed at each ablution, in the latter more watery and drying more quickly into scales or thin crusts.

Diagnosis.—A little difficulty sometimes arises in making a differential diagnosis between Seborrhœa and certain cases of eczema, occupying the favorite seats of the former affection; but a careful attention to the characteristic features of the two affections will usually overcome it. When Seborrhœa is located on the scalp it may be mistaken for pityriasis, as both affections exhibit fine scales. In the former case, however, the scales are made up of dried sebum, entangling a few epithelial cells, derived chiefly from the sebaceous glands; in the latter the scales are chiefly composed of horny epidermic cells entangling a little sebum. HEBRA has unfortunately confounded these two conditions, embracing both under the same title (Seborrhœa). In this he has been blindly followed by his adherents, both here and abroad, but one modern Vienna writer (AUSPITZ) recognizing the essential difference that exists between the two affections.

Prognosis.—The affection is of slight gravity, possessing little importance in itself except as a matter of inconvenience to the patient, or as an index of debility and depraved nutrition. It is usually curable, though often obstinate and tedious.

Etiology.—It is a little hard to fix the causes of Seborrhœa, as the affection, in an aggravated form, is not very common. It is very distinctly not allied to pityriasis, but seems to the writer to be more closely connected on the one hand to acne, and on the other to hyperidrosis. As a rule, writers usually consider debility and depraved nutrition to be the principal etiological factors. The fact, however, that glandular activity, normal and abnormal, is so directly under the control of the ganglionic nervous system, would suggest that investigations in this direction might throw more light than we at present possess on this subject.

Treatment.—It is but axiomatic to state that hygienic management is of prime importance in this as in so many other affections. As a rule, however, this is but little regarded, the physician usually thinking of some local application of an absorbent or astringent character. It is the almost exclusive employment of these that leads so many to regard the affection as a peculiarly obstinate one. If a permanent cure is to be affected, something else than this must be done. In the presence of debility, depraved nutrition, or any manifest general or local disease, whether the Seborrhœa can be plainly traced to them or not, it is clearly a wise proceeding to try to remedy them. This done we come to the direct or specific treatment of the affection itself. At the outset I must confess that I am unacquainted with any drug that, internally administered, acts with a specific or directly curative effect on Seborrhœa. We come then to local treatment, which is either palliative or curative. By palliative treatment we seek simply to lessen the inconveniences that the patient complains of. The simplest means to this end are frequent ablutions of the part with ordinary soapsuds, and, after drying, the application of some inert absorbent or a slightly astringent powder, the ingredients of which may be starch, rice-powder, lycopodium, oxide of zinc, subnitrate of bismuth, talc, tannin, etc. More frequently I direct patients to employ, instead of soap, a strong decoction of quillaya (℥ iv.—Oij. of water, boiled down to a pint), or the fluid extract of quillaya, to which a little water (five to ten per cent.) has been added. The absorbent powder then follows. A combination of palliato-curative treatment much in vogue is the use of Sapo Viridis or Tinctura Saponis Viridis (*Spts. Saponatus Kalinus* of Hebra), followed by the use of lotions containing sulphur, or acetate of lead, or simply precipitated sulphur, diluted five or tenfold with an inert powder, and dusted on the parts with a powder-puff.

A more directly curative application, however, that has in my hands rendered good service, is a mixture of extract of ergot (ergotin), and hydrated silica, with glycerine or rose-water ointment. To this a little precipitated sulphur may be added. This combination has certainly seemed to me to control the activity of the glands, and exert an unmistakable curative effect. This may be alternated with applications of Tincture of Sulphur.

SYPHILIS.

SYPHILIS is a disease that expends much of its energy on the skin, but as it is one that pervades the entire system, it must be considered as a whole and not in its cutaneous relations alone. I shall therefore present its principal features in detail, and as briefly as is consistent with clearness.

History and general considerations.—It was during the last decade of the fifteenth century that this disease first attracted notice. Whether it existed before, and whence it came, are questions which cannot be definitely answered. Appearing first in Southern Europe, it spread rapidly through other portions of the continent and to the adjacent islands, and soon became recognized as an important and formidable affection, in its symptoms and consequences rivalling leprosy, with which it was later confounded. From that time until the present the disease has continued to exist, and has spread to every country penetrated by the footsteps of civilized man. Although the main features of the disease are the same as those which it presented in the beginning, it has, in certain respects, been somewhat modified. It is more especially as regards its general severity that we are more fortunate than our predecessors. Although we occasionally find isolated cases which fully realize the descriptions given in the past, they certainly are very rare. As the severe cases of the present day are chiefly those which have been neglected or improperly treated, it is not improbable that these causes were the principal factors concerned in the production of the state of affairs described by the older writers. On the other hand, the comparative mildness of the disease as at present seen is undoubtedly due to the more general attention and more judicious treatment that it now receives. The wide diffusion of the disease, however, and its ever readiness to assume, under favoring influences, the most malignant and destructive phases, render it worthy of the most serious study. It is, in fact, the most important of the affections which receive attention in this volume. In consequence of the varied phenomena presented by the disease, we are compelled to consider it from several points of view, more particularly its modes of propagation, its lesions, its course and variations, its diagnosis, prognosis, and treatment.

Modes of contagion and propagation.—Syphilis is usually contracted during sexual intercourse, but this is not the only medium by which it may be propagated; it may be also communicated by kissing, and through vaccination, and by certain unnatural practices. It may also be given by syphilitic wet-nurses to their nurslings, and *vice versa*, as well as by drinking-vessels, table utensils, pipes, etc.

Manifestations.—The manifestations of syphilis are so numerous and multiform that the disease can only be comprehended in its entirety by a careful analysis of its phenomena from several different points of observation. We shall therefore consider its lesions and stages, and the tissues and organs liable to be affected.

Lesions.—The principal lesions of syphilis are macules, papules, tubercles, vesicles, bullæ, pustules, gummata, and diffuse infiltrations, and, dependent upon some of the foregoing, ulcerations, crusts, and scars. The definitions given of the lesions met with in non-syphilitic affections of the skin apply equally to those of syphilis. It is necessary, however, to define the term *gumma*, a lesion which plays an exceedingly important part in connection with this disease. The name is applied to certain circumscribed nodules located in the subcutaneous connective tissue, or within the substance of various deeper organs. These nodules consist mainly of collections of closely packed small round cells, which preserve their form and vitality for a certain length of time; but which ultimately become the seat of degenerative processes, and undergo cheesy metamorphoses, or disappear by means of suppuration and ulceration. These gummata rarely appear in the early stages of syphilis, but, as a rule, play their rôle in connection with the later developments of the disease.

Stages.—Three stages of syphilis are usually described, namely, the primary, secondary, and tertiary. We must admit, however, two others, to wit, a stage of incubation which is present from the time the disease is contracted, and lasts until the appearance of the first visible manifestation of the disease. When this latter, to which the name of *chancre* is given, develops, we have the beginning of the so-called primary stage. This lasts until the appearance of certain general symptoms announce the secondary stage. This in turn is followed by the tertiary; but between the two there is usually a stage or condition characterized by the appearance of lesions which, under the usual definitions, we hesitate to term either strictly secondary or strictly tertiary. To this period the term intermediary may, with propriety, be applied.

The stage of incubation.—This period varies from two to five weeks, but its usual duration is from three to four weeks. Its commencement dates from the entrance of the syphilitic virus, but during its continuance there is not the slightest symptom or visible lesion that can be recognized as pertaining to the disease about to be developed. If the contagion gains entrance through an abrasion this latter heals just the same as it would have done if there had been no inoculation; if the disease is conveyed with vaccination, the vaccine vesicle pursues its early course unmodified. At the end of the period of incubation we find arising at the point where the virus has entered a small, somewhat tawny red, indolent papule. This papule is called a *chancre*, or the initial lesion of syphilis, and marks the commencement of the "primary stage."

The primary stage.—The papule may, in its further course, undergo several modifications. If situated upon the skin, as in artificial inoculations, it usually remains as a dry papule over which the stratum corneum is seen tightly stretched; later this layer separates, and is perceived at the summit of the papule as a thin scale. If the tissues lying directly underneath the papule be delicately grasped between the thumb and index finger a certain amount of resistance is perceived. This resistance is due to the presence of a layer of hard infiltrated tissue constituting the so-called *induration.* The induration may be confined to a lamina not much thicker or stiffer than a piece of parchment, or it may approach the size of a split pea, or even the half of a small cherry. It is this induration which constitutes the fundamental characteristic of the true or hard chancre as distinguished from the chancroid. After an uncertain period, varying from two weeks to two months, the chancre undergoes retrogressive changes, which consist in the subsidence of the papule and disappearance of the induration. In many cases of cutaneous chancre the above-described course is not strictly followed. The epidermis, instead of remaining as a tense membrane stretched over the papule, gives way, and a superficial ulcer results. The secretion from this ulcer is scanty in amount, and unless irritated contains but little pus.

When the chancre appears upon the mucous surface of the penis, it may present the characters of the dry papule above described. More frequently, however, erosion or ulceration occurs, owing to the more delicate character of the epithelium. When the lesion is situated at the preputial reflexion we not uncommonly find an excessive degree of induration.

When the chancre appears upon the female genitals, it rarely presents more than the slight parchment induration, and sometimes even this is absent or inappreciable. In a very considerable number of cases in females, the chancre passes through its various stages, and disappears without having awakened the attention of the patient.

Extra-genital chancres, as those situated upon the lips and the mammæ, generally exhibit marked induration.

Chancre is usually painless, unless irritated by excessive venery or other causes. Under these circumstances it may become inflamed and painful, and covered with a free purulent exudation, and be with difficulty distinguished from a chancroid.

Chancre is not, as a rule, inoculable upon a person bearing it, or upon another who is already syphilitic.

Adenitis.—Within a week or ten days after the appearance of the chancre we usually find other symptoms arising, which are highly characteristic of syphilis. These are indolent and indurated tumefactions of certain lymphatic glands. When the chancre is located upon the genitals the inguinal glands are first affected. The increase in size may occur upon one side alone, but more frequently upon both. As a rule, several glands upon each side are involved. They may vary from the size of a hazel-nut to that of a pigeon's egg, and, as a rule, are painless; more rarely they become inflamed and suppurate after the manner of the chancroidal bubo. The enlargement and induration persist for months, and sometimes for years. In addition, certain ganglia at the back of the neck become affected in the same way, though they rarely attain the size of the glands in the groin. Besides these, certain glands situated above the inner humeric condyle, the so-called epitrochlear or cubital glands, frequently become involved upon one or both sides. When the chancre appears upon the finger in consequence of an accidental inoculation, the cubital glands are first involved, and subsequently the axillary.

Diagnosis of chancre.—When a suspicious sore exhibits the characters peculiar to chancre, and especially marked induration, together with involvement of the inguinal and post-cervical glands, the diagnosis is effected without difficulty and absolutely. If, however, induration is absent, and ganglionic involvement has not yet occurred, or the sore is inflamed and suppurating, the diagnosis may be exceedingly difficult, in fact, impossible.

Secondary stage.—After the primary stage has lasted from one to two months, additional phenomena arise, and usher in the so-called secondary stage. The earlier manifestations of secondary or constitutional syphilis include general febrile action, called syphilitic fever, flat moist papules upon the mucous membranes and the integument surrounding the genital organs, called mucous patches, and a general eruption or efflorescence upon the skin. These symptoms do not always follow each other in the same order, and one or more of them may be absent.

Syphilitic fever.—This is simply a febrile attack more or less sharp, and accompanied with general malaise, gastric disturbance, headache, etc. It usually lasts for a few days only, and then passes off, and may be quickly followed by the cutaneous eruption. There is nothing distinctive in the character of the fever that will enable it to be recognized as syphilitic, except its previous history or subsequent developments. The mucous patches and special eruptions will be considered in subsequent pages. The lesions mentioned, especially the early cutaneous eruption, may disappear spontaneously, to be followed by fresh outbreaks of eruption, in which the lesions present a somewhat graver aspect. The cutaneous trouble may be papular or squamous. As a rule the eruption is extremely superficial, and when it disappears leaves a temporary stain, without scar. During this period, also, the hair may fall out, producing a more or less complete, but also temporary alopecia. The eyes, too, may become involved, and variously situated pains may torment the unfortunate victim.

Intermediate stage.—After the occurrence of various secondary symptoms which have disappeared spontaneously, or have been removed by treatment, it is not uncommon to have a lull lasting a few weeks or months, or even years. During this period we may have absolutely no symptoms or signs indicative of syphilis; or, perhaps, the occasional appearance of an isolated lesion, which may partake of the superficial character of the usual secondary lesions, or, on the other hand, may be but a foretaste of graver trouble yet to come.

Tertiary stage.—If the disease has not been definitely and permanently arrested in its development during the preceding stages, it may pass on to the condition known as tertiary syphilis. During this period we encounter profound modifications, not only of the superficial, but also of the deeper tissues and organs. The mucous membranes may become involved in extensive and destructive ulceration. The integument becomes the seat of tubercles, pustules, and ulcers, the periosteal membranes inflame, and the bones are affected with caries or necrosis. The vital organs also may become involved in the syphilitic processes. Not only the lungs, liver, intestinal tract, and kidneys, but the nerves, spinal cord, and brain may be invaded, with ultimately a fatal issue.

In the tertiary stage the patient may suffer greatly from debility, and the establishment of a general cachectic condition.

We see then, from this general review, that syphilis is a disease capable of affecting the entire organism, and often in a disastrous manner; we see that few, if any, of the tissues or organs are exempt from its ravages, and we are forced to the conclusion that it is a disease which invites our earnest attention and most careful consideration. To gain a proper comprehension of its varied character we must study it from several points of view, and we will commence with its effects upon the different tissues.

Syphilis of the mucous membranes.—The first visible manifestation of syphilis upon the mucous membranes is the chancre. This we have already considered. Next comes the moist flat papule or "mucous patch." This lesion may appear upon the mucous membranes of the genitals of both sexes, and upon the neighboring integument; upon the lips, tongue, soft palate, tonsils, and pharynx, and in fact any portion of the buccal and nasal cavities. It has also been met with in the external auditory canal, and upon the palpebral conjunctiva. This lesion consists of a flat elevation, varying from the size of a split pea to that of a dime, or even larger. Its elevation is usually from one to five mm. ($\frac{1}{25}$—$\frac{1}{5}$ inch). Its surface is moist, finely granular, and of a grayish aspect. It is usually one of the first of the earlier manifestations of constitutional disease. Subsequent to the appearance of mucous patches, or sometimes preceding them, we may find diffuse congestions of the mucous membranes of the fauces and neighborhood, accompanied with a certain amount of irritation and uncomfortable sensation. This condition constitutes the early "sore throat" of syphilis. This same diffuse congestion may invade the mucous membranes of the epiglottis, the glottis, and the larynx. When it does so, more or less hoarseness and even complete aphonia may be present. Besides these, and later on in the disease, we are liable to encounter another peculiar lesion. This may be described as a localized opaline or milk-white spot situated upon the tongue or buccal membrane. These milk-spots are barely if at all elevated, and usually not eroded. A single spot may appear, or several may be present at the same time. When one is cured another crops out, and a succession of them not unfrequently show themselves throughout the secondary and intermediate periods, and may constitute the only visible manifestations of the disease. The use of tobacco and negligence in the care of the teeth encourage these lesions. In the later stages still more serious affections of the mucous membranes are liable to appear, such as ulcerations about the genitals, mouth, nose, pharynx, larynx, etc. They will be considered under the head of special organs.

Syphilis of the skin.—To the cutaneous manifestations of syphilis the names *syphilodermata* and *syphilides* have been applied. We prefer the latter term.

Although the different syphilides vary greatly in their aspect, lesions, and course, they still possess certain common characteristics. These are *color*, *configuration*, and *the absence of local subjective symptoms.*

Color.—The *color* of the syphilides has been likened to that of copper, or of raw ham, but neither resembles it exactly; it is a color *sui generis*, and peculiar to syphilis, which must be seen to be exactly appreciated, and is not counterfeited by non-syphilitic affections of the skin, though sometimes closely approached in certain cases of psoriasis, lichen planus, and lupus.

Configuration.—The earlier syphilides are usually composed of small lesions widely diffused; the latter, of larger ones, more sparsely distributed. The earlier ones involving the skin but superficially, recover without leaving cicatrices; the later ones invading more deeply often exhibit a tendency to ulceration with consequent scarring, but cicatrices may result even without ulceration. The marks left by the later syphilides are usually brown, but subsequently become white, whiter even than the normal skin. The pigment is first removed from the centre of the spot, and later forms a ring around it just before its final disappearance. The white spot is thinner than the normal skin, is non-adherent and quite smooth, without the irregularities and puckerings met with in scrofulous scars.

The syphilides frequently exhibit a tendency to assume a circular arrangement. If the eruption consists of small lesions, they will often be grouped in round or oval patches, and if of large and isolated lesions, the same tendency will be noticed. A few rounded groups of pustules may be the only manifestation present. The tendency of these, unchecked by treatment, is to extend centrifugally, healing in the centre, and in this way we may have a suppurating, perhaps ulcerating ring inclosing an area of discolored skin on its way to cicatricial degeneration. If the lesion be an isolated ulcer, it is usually round or oval, with perpendicular sides and a grayish base, the margins not irregular and undermined as in some other forms of ulceration. This circular configuration is observed in but few of the non-specific eruptions.

Absence of local subjective symptoms.—The syphilides, both early and late, are characterized by the absence of itching and pain. The most extreme generalized eruptions of early syphilis are, as a rule, free from pruritus and widespread ulceration, and if it involves the skin only, is unattended with pain. The different syphilides present certain special peculiarities which we will now consider.

Macular syphilide.—This is the earliest eruption of syphilis, and usually makes its appearance within the first or second month after the development of the chancre. It consists of small red spots, from $\frac{1}{16}$—$\frac{1}{4}$ inch in diameter, scattered over the thorax, abdomen, back, and upper extremities. The macules may be discrete or confluent, and are usually upon a level with the surrounding skin, but are sometimes slightly raised. At first the color is rosy and disappears under pressure, but later becomes somewhat darker and permanent. The eruption usually lasts from four to eight weeks and subsides spontaneously.

Papular syphilide.—This form sometimes occurs by itself, at other times accompanies, or appears just at the decline of the last-mentioned variety. It consists of acuminate or flattened elevations frequently decked with a minute scale. These papules persist for a few weeks, and then disappear, or while still existing, may be complicated with much larger papules, in fact, tubercles. The papules proper exhibit no tendency to ulcerate, but slowly subside, leaving after them a small brownish macule, which soon fades away without leaving any perceptible alteration of the skin.

Tubercular syphilide.—This variety, as its name implies, is an eruption consisting of tubercles, ranging in size from a pea to a hazel-nut. Their summits are usually covered with a few fine scales. They may appear as an early or as a late manifestation. In the former case, they occur as isolated lesions disseminated over the surface; but when occurring later, they are frequently associated in circumscribed groups. The tubercles disappear by absorption or by ulceration, in either case leaving a brownish mark behind, and a more or less evident cicatrix as an ultimate condition. When they ulcerate they become covered with a greenish or greenish-black crust, underneath which lies the ulcer. This form of eruption is not infrequent, but is more commonly met with in cases of neglected syphilis, than in those which have received careful and appropriate early treatment. It is usually a late lesion.

Vesicular syphilide.—This is a rare lesion, belonging to the secondary period, and usually consists of moderate-sized vesicles, scattered irregularly over the surface, or collected in little groups. Each vesicle is surrounded by a coppery areola; they break in a few days, and are replaced by thin crusts or scales. When the crusts are removed the surface beneath them is brownish red. This form of eruption usually lasts several months, and is maintained during this period by successive crops of new vesicles. The lesion is quite superficial, not involving the skin very deeply, but generally leaves brownish macules, which take some time to fade away. Occasionally, small vesicles develop upon the summits of papules in connection with the early papular lesions.

Bullous syphilide.—This is an exceedingly rare lesion in adults, but is quite common as a manifestation of hereditary syphilis in infants. It consists of large vesicles or bullæ appearing shortly after birth, whose favorite seat is the hands and feet, but they may also appear upon the trunk and limbs. It is the so-called syphilitic pemphigus of infants.

Pustular syphilide.—Pustules occurring in connection with syphilis present several varieties, as regards their aspect, course, and termination, and are among the most important of the cutaneous lesions met with in this disease. They occur under three principal forms.

The first consists of small pustules disseminated over the surface, frequently in great number. Each pustule is found to rest upon a hard and raised base, as if the upper half of a papule had changed into a pustule. A hair frequently runs through its centre. The course of these pustules is usually indolent; each one, after lasting two or three weeks, bursts, and its contents dry into thin greenish crusts which adhere for a week or two longer. Upon the falling or removal of the crusts we find a coppery papule with a depressed and perhaps ulcerated summit. The papule slowly disappears, leaving behind a brown macule, which in turn gives place to a minute white cicatrix. This form of eruption is the so-called syphilitic acne.

In the second variety we find the pustules larger than the foregoing, and without the raised base, and, as a rule, less numerous. They are surrounded with a tawny areola, without marked induration. The pustules soon break, and their contents dry in greenish or sometimes dark crusts; on the removal of the crusts superficial circular ulcerations will be discovered. These heal readily, but always leave cicatrices. The eruption may persist for several months, being prolonged by the occurrence of fresh pustules. It usually appears during the latter portion of the secondary period, and may occur upon any portion of the cutaneous surface, including the scalp. This form is the syphilitic ecthyma of authors.

A third variety of pustule is met with occurring in the tertiary stages of syphilis. They are large, isolated, and scattered over the surface, and vary in number from a single one to thirty or forty. These pustules contain a mixture of pus and sanious fluid, and soon dry into thick, dark-colored crusts, covering a deep ulcer. The ulcer gradually enlarges and continues to secrete an ichorous and unhealthy pus, which likewise dries into a crust having a greater diameter than the first one, which still adhering, it pushes before it. This process continues, new crusts form, pushing forward the earlier ones, until in time we have a stratified cone, half an inch or more in height, projecting from the surface, upon the removal of which, a deep ulcer with abrupt margins and an unhealthy base is perceived. If the progress of the eruption is unchecked, a fresh crust, possessing the characters of the former, soon forms, the ulcer meanwhile steadily enlarging. This form of eruption is sometimes called rupia.

Squamous syphilide.—We have already noticed the fact that papular and tubercular lesions frequently exhibit scales in connection with them. In some cases this commingling of characters is so decided that it is hard to say which predominates, or even to recognize the pre-existing lesions. These mixed forms may, with propriety, be termed papulo- or tuberculo-squamous. In addition to these, however, we may have lesions which are decidedly scaly from the beginning. These true squamous syphilides consist of brownish red patches, covered with a thin coating of scales. The patches are usually rounded or annular, forming circles, or segments of circles, and are very slightly elevated above the surrounding surface. The scales which cover them are of moderate size, but not imbricated, and do not form very thick layers. Usually, they do not completely cover the coppery base, but permit a little rim of it to appear at the edge. The scaly syphilide may appear upon any portion of the surface, frequently invading the scalp. It may also occur upon the palm of the hand and sole of the foot.

Syphilis of the connective tissues.—The *gumma* is the lesion most frequently developed in the connective tissues. Its principal features have been already described.

Syphilis of the glandular and nervous tissues.—The principal lesions affecting these tissues are gummata and diffuse infiltrations. They will be considered in connection with the special organs involved.

We will now consider the principal lesions to which the different organs are liable, commencing with those of the penis.

Penis.—The chancre and the flat condyloma, or mucous patch, have already been noticed. These, however, are not the only lesions which may affect the organ. Well along in the secondary stage ulcerations may occur upon the glans, or upon the integument of the organ. In the former case they frequently coexist with similar lesions upon other parts of the skin, and present no special peculiarities. On the glans the ulceration may partake of almost any form and aspect, and may sometimes be mistaken for other venereal lesions, as chancroids. With a clear and definite history, no difficulty should be experienced in distinguishing them; but when this is wanting, it is often no easy matter to say, with positiveness, that a given lesion is or is not syphilitic, and the treatment alone may be the means of establishing the diagnosis.

Testicles.—Syphilitic lesions of these organs rarely occur until late in the disease, and usually under the form of diffused interstitial infiltrations, leading to a usually painless uniform enlargement of the organ, termed *orchitis.* The increase is gradual, and without acute symptoms, and may produce inconvenience solely by its size, which is sometimes two or three times that of the normal organs. If we have a distinct syphilitic history, and consider the indolent nature of the lesion, there will in general be little difficulty in diagnosis. The affection is to be distinguished from gonorrhœal epididymitis, from hydrocele, from hæmatocele, and from simple inflammation depending upon traumatic causes. In syphilitic disease the testicle proper is involved; but in the gonorrhœal affection, the epididymis is the principal seat of the inflammation, the testicle not participating, or at most to a minor extent. In epididymitis the inflammation is acute, and the parts painful and tender. The other affections are to be distinguished by the rules laid down in works on surgery.

Instead of the diffuse form of orchitis, we may find one or more gummy nodules scattered through the substance of the organ. These may subside under treatment, or soften and discharge through the scrotum. The affection is to be differentiated from tubercular and cancerous disease.

Vulva.—Chancre of the vulva is very often an extremely trivial affair. If situated upon the mucous surfaces of the labia majora, or upon the labia minora, or upon the neighboring mucous membranes, it may, though rarely, consist of a well-marked lesion, with characteristic induration. Very frequently, however, we find little more than a superficial erosion, with the least possible degree of parchment hardening.

In many instances the lesion may exist and disappear unknown to the patient. As a rule, the lesion is single, in marked contrast with the chancroid, which is frequently multiple. After the disappearance of the chancre, or even before it is entirely gone, additional syphilitic lesions may appear upon and around the vulva. These are early secondary manifestations, the so-called "mucous patches." They are usually multiple, as many as fifteen or twenty being present at the same time. This lesion presents itself under three principal forms. These are the superficial erosion, the slightly elevated and circumscribed mucous patch proper, and the hypertrophic patch or condyloma. The superficial erosion is developed upon the mucous surfaces of the labia majora, on the labia minora, and other parts of the vulva. The lesion is circular or crescentic, and is sometimes underlaid by an appreciable parchment induration. In this case it may, with difficulty, be distinguished from the chancre.

The multiple character of the lesion, the sometimes irregularity of contour, and the prior occurrence of a chancre, are the principal aids to diagnosis. The raised patch or mucous patch proper develops upon the regions above mentioned, but is most distinctly exhibited upon the cutaneous surfaces immediately adjoining. It differs from the preceding in being somewhat elevated. The surface is eroded, and usually covered with a grayish, sometimes diphtheroid exudation. These lesions vary in size; many of them may be flat papules, the size of a small pea, while others may be half an inch or more in diameter.

The *condyloma* is simply an overgrown mucous patch. The causes favoring the development of this and the preceding lesions are heat, moisture, and uncleanliness, and where these exist to a marked extent the mucous patch is stimulated to excessive growth, both in height and diameter. Neighboring patches may touch and become confluent, so that we may find an extensive raised vegetating surface exuding a certain quantity of the fetid pus. The lesions mentioned are all early syphilitic manifestations.

Later in the disease, however, we sometimes meet with distinct ulcerations, often accompanying, and analogous to the ulcerative lesions of the skin. These can usually be diagnosticated as syphilitic, though often with difficulty distinguishable from chronic chancroids. Sometimes the history or subsequent developments will alone enable a diagnosis to be made.

Still later in syphilis, well along in the tertiary period, gummata may make their appearance about the vulva.

These are distinguished as submucous or subcutaneous nodules, or small tumors, which may subside under treatment, or else soften and suppurate, and discharge externally. Subsequent cicatrization and contraction of the tissues may produce more or less deformity of the organs.

Syphilis of the vagina and uterus.—The vagina is very rarely the seat of syphilitic lesions, either primary or secondary. The neck of the uterus presents them more frequently. In either case they may appear under the form of chancre, or secondarily as superficial erosions, flat papules, or ulcerations.

Syphilis of the anus.—The anal region in both sexes is liable to be affected. Primarily it may become the seat of chancre, and secondarily, of various forms of mucous patch, and particularly of the exuberant form or condyloma. Ulcerations and ulcerated fissures are also met with.

Syphilis of the mouth.—Chancres may occur upon the lips, tongue, internal surface of the cheeks, soft palate, and tonsils. Upon the lips they usually present very decided induration.

The secondary lesions of the buccal cavity consist of mucous patches and ulcerations. The former present either the form of flat, scarcely elevated opaline patches or milk spots, and are met with upon the mucous surfaces of the lips, the inside of the cheeks, and the tongue, especially along its edges and under surface. More distinctly elevated and slightly eroded patches are met with in the same regions, and also upon the roof of the mouth, the tonsils, and soft palate. Later in the disease distinct ulcerations may appear upon the tongue, tonsils, and palate. These sometimes result in very considerable destruction of the parts affected, the tonsils being eaten away, and the soft palate more or less completely destroyed. Still later we sometimes find ulcerations in the roof of the mouth leading to necrosed bone.

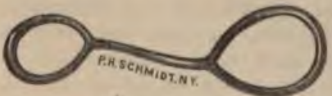

Fig. 30.—Oral speculum.

The examination of the mouth will be greatly facilitated by the use of an instrument of the form shown in Fig. 30. It should be from five to six inches in length.

Syphilis of the nose.—In the earlier periods we may find a catarrhal condition of the nasal passages, with or without mucous patches. Later, erosions or deep ulcers may occur with involvement of the perichondrium and periosteum, and result in necrosis of the cartilages and bones. These lesions are usually accompanied with more or less suppuration, and with extreme fetor of the breath. To this condition the name *ozæna* is applied. The diseased processes may continue until the cartilaginous portion of the septum nasi, the vomer, and other bones perish by necrosis. When this occurs the necessary result will be flattening of the nose and very considerable deformity.

Syphilis of the larynx.—The mucous membrane of this organ and of neighboring parts may become the seat of a diffuse but superficial congestion, not attended with any special inconvenience, except slight hoarseness. More frequently, however, the disease invades the upper portion of the larynx, above the vocal cords. The membrane becomes thickened, with decided hoarseness and even aphonia. Ulcers too, of various size and depth, may form, accompanied with similar conditions of the epiglottis. Late in the disease these ulcerations may destroy the epiglottis completely, besides severely injuring the false and true vocal cords and parts beneath them. When the ulcerations heal they may greatly deform the organ, and seriously interfere with its usefulness.

Syphilis of the eyes.—The most frequent and important syphilitic affection of the eyes is iritis. It is characterized by circumorbital pain, by injection of the sclerotic around the cornea, by change in the color of the iris, and by immobility of the pupil under the stimulus of light. Fibrinous exudation occurs at the margin of the pupil and upon the posterior aspect of the iris. The exudation is often poured out in sufficient quantity to extend to the capsule of the lens, uniting it to the iris with adhesions, which if neglected may become permanent. Iritis usually occurs early in the disease, and frequently in connection with other secondary manifestations. The choroid and retina are sometimes though rarely affected.

Syphilitic affections of the bones.—More or less severe pain, usually referred to the bones, may occur during the earlier months of secondary syphilis; more frequently, however, it is a later trouble belonging to the tertiary period. The superficial bones are specially affected, and the pain is most severe at night. The parts affected are tender on pressure, and here and there circumscribed swellings are apparent. These are due to periostitis, with lifting of the periosteum by infiltration between it and the bone. The swellings, at first soft and elastic, may undergo complete resolution, or may become exceedingly hard in consequence of the deposition of new bony material, and are then called nodes. In some cases suppuration occurs, with the formation of abscesses which break and expose the bone, which latter may have already become partially necrosed. The long and flat bones lying just beneath the skin, as the tibiæ, clavicles, sternum, and skull bones, are most liable to be affected. Besides these, necrosis of the bones of the nose, as already noticed, is apt to occur in late disease.

Syphilis of the liver and kidneys.—Syphilitic disease of the liver generally develops under the form of gummy tumors. Gummata of the liver may vary in size from a small seed to that of a pigeon's egg, and usually consist of a condensed connective-tissue capsule containing cheesy or softened masses. They may exist singly or in great numbers. If gummata of the liver disappear, it is by softening and absorption, as they rarely if ever open on the surface of the organ. *Amyloid* degeneration sometimes occurs late in the disease, usually associated with a similar condition of the kidneys. The kidneys may also become the seats of gummy tumors and of diffuse infiltration.

Syphilis of the nervous system.—The brain, spinal cord, and nerves are liable to syphilitic invasion in the later periods of the disease. The brain not unfrequently becomes the seat of gummy tumors, usually developed in connection with the membranes. They may be single or multiple, and produce varying kinds and degrees of functional disturbance, dependent upon their number, size, and situation. The principal symptoms are pain, sleeplessness, disturbed intellect, paralyses, aphasia, epileptiform convulsions, coma, etc. Death is the usual termination. Besides the gummy tumors located in the brain-tissue, other no less important changes occur in the arteries at the base of the organ. These vessels become the seat of syphilitic new growths which, to a greater or less extent, occlude their lumen. The symptoms that result are such as we would expect to encounter as a consequence of diminished local nutrition.

Syphilis of the spinal cord.—Gummy tumors of varying size are sometimes found in the cord, usually in connection with the membranes, and frequently accompanied with symptoms of meningeal inflammation. If the tumors attain sufficient size to interfere with the functions of the cord various paralyses may result. If the gumma be located low down, paraplegia may be induced; if higher up, the sphincters may be involved, and if the tumor is situated on the cervical region, the nerves leading to the muscles of respiration may be interfered with. In this latter case the affection, unless checked, will prove fatal.

Course.—The natural course of syphilis is so seldom observed that we are really without exact data with which to compare its march when modified by remedial agencies. As ordinarily met with, however, we pretty constantly find that no two cases exhibit the same manifestations in the same succession; this is due in part to differences of constitution or idiosyncrasy, and in part to effects of different methods of treatment. In general, however, the earlier manifestations of constitutional disease are of a superficial character, while the later ones affect the tissues profoundly. There is frequently a distinct interval of months and even years between the secondary and tertiary lesions; while on the other hand, these latter may invade the skin and deeper organs while the former are still present. The kind of treatment employed undoubtedly influences the course of the disease. Injudicious treatment, if simply inefficient, may render the disease exceedingly capricious, or, on the other hand, proper medicines employed in excess may greatly aggravate the patient's condition.

In some instances the disease would appear capable of undergoing a spontaneous cure, a year or two of mild lesions being succeeded by complete recovery. In other cases, which perhaps have been influenced little, if at all, by treatment, a long period of freedom from disease may be followed by manifestations of the gravest type. The course of syphilis then is so uncertain that it is impossible to predict the sequence which the various lesions will follow, and it is equally impossible at any given time to assert that the disease has finished its career.

Diagnosis.—Under ordinary circumstances, and in the majority of cases, the diagnosis of syphilis is comparatively easy.

The *chancre*, or first manifestation of the disease, is to be distinguished from *chancroid*. *Mucous patches*, whether occurring about the genitals, the anus, or the mouth, can hardly be mistaken for anything else, especially if the inguinal and post-cervical glands are enlarged, and a chancre has preexisted. It must be remembered, however, that in females a large proportion, if not a majority, of chancres pursue their course without attracting the attention of the patient. In many cases, too, their previous existence will be denied. The various cutaneous manifestations of the disease are to be distinguished from non-specific eruptions by their color, configuration, distribution, previous history, etc. If proper attention has been paid to their peculiarities at the clinic, little difficulty will in general be experienced, as there are but three or four non-syphilitic affections that are likely to be closely counterfeited. Syphilitic roseola may in many cases be indistinguishable from simple roseola (rötheln) in its objective aspects. The history, however, and the course of the eruption will usually assist the diagnosis. Lichen planus sometimes very closely resembles a papular syphilide, so closely, indeed, that even an expert may be in doubt. The diagnosis between a *squamous* syphilide and certain not very typical forms of *psoriasis* is also sometimes difficult. When the eye cannot decide our recourse is to the history. The squamous syphilide has probably been preceded during a year or two by other eruptions differing from it in character; psoriasis, by previous attacks of the *same* eruption which have appeared from time to time for perhaps many years. Some of the pustular syphilides may resemble acne, more particularly the affection of the sebaceous glands that often follows the excessive use of bromide of potassium, the so-called "bromic acne." Ulcerative lesions about the face are sometimes difficult to distinguish from lupus. In these cases a careful study of the patient's history, and the appearances of former scars, if any such exist, are often of more value in a diagnostic point of view than the aspect of the lesion itself. Further, the syphilitic ulceration has probably lasted but a few months, while the lupous disease may have been present for years.

Syphilitic bone pains and nodes present little difficulty in diagnosis, but the affections of the viscera and of the nervous system will frequently baffle the most careful and expert diagnosticians. In fact, a correct diagnosis in many cases can only be determined by carefully watching the effects of treatment.

Prognosis.—The general prognosis in syphilis is good, both as regards the removal of existing lesions, and the ultimate comfort of the patient, in cases that are seen early in the course of the disease, and are subjected to judicious treatment. On the other hand, cases that have been neglected or badly treated in the beginning are more difficult to manage, and more apt to present frequent relapses. Besides these, there are a number of other circumstances that modify the course, and consequently the prognosis. Among them may be mentioned the general health of the patient, his habits as regards temperance in eating and drinking, and his ability to procure proper and sufficient nourishment, medical attendance, etc. His occupation, if one necessitating much exposure, may likewise influence the result. In addition it must be remembered that some cases are naturally light, and that others, on the contrary, are particularly severe. These various elements therefore must be borne in mind whenever we consider the prognosis of syphilis, either with respect to a particular case, or as regards the disease in general. The various lesions, too, have each their separate and individual prognosis. The chancre is rarely more than a temporary inconvenience. Occasionally, however, it becomes complicated with phagedenic action; and more or less sloughing may seriously impair the symmetry and usefulness of the affected organs. Ulceration about the soft and hard palates may permanently impair the voice, and be accompanied with even more serious inconvenience. Necrosis of the bones may confine the patient to bed, and interfere, for a greater or less time, with his usual occupations. Affections of the eye, if not promptly treated, may seriously impair vision, and disease of the nervous centres may produce permanent disability or speedy death.

TREATMENT OF SYPHILIS.

The treatment of syphilis must be considered under three heads: First the hygienic, second the specific, and third the local.

Hygienic treatment.—The very first points to which the physician should devote his consideration are the condition of the patient's general health, his habits, and his surroundings. If his health is good, his habits correct, and his circumstances comfortable, it is only necessary that these conditions be preserved.

If, however, he is suffering from some previous disease, this should be relieved, or its effects obviated if possible. If he is intemperate, reformation is a *sine quâ non* of successful treatment. Good health, good food, good air, suitable clothing, freedom from undue exposure to the elements, regular exercise, and methodical habits constitute more than half of the treatment, and combined with proper specific medication rob the disease of most of its terrors. *Per contra*, the absence of these essential elements will greatly impair the effects of otherwise judicious treatment, and not unfrequently lead to relapses, annoying alike to the physician and the patient.

Specific treatment.—This embraces the use of mercury, the only known specific and directly curative agent yet discovered, and of the iodides of potassium and sodium, and the chlorides of gold and platinum, for the relief of certain symptoms pertaining to the later periods of the disease.

The basis of anti-syphilitic treatment may be expressed by a single word, and that word is MERCURY. That mercury, when properly administered, cures syphilis is beyond a question; that it is the best known remedy for this purpose we firmly believe. The question, however, is frequently raised as to whether mercury, although curing the syphilis, may not produce effects nearly, if not quite as bad as the original disease. This will depend entirely upon the manner in which it is administered. Abundant experience has shown that if properly given it may be continued almost indefinitely, with the result of curing the disease, and without in any way injuring the health or constitution of the patient. On the other hand, it may be given in such a way as to produce the most disastrous consequences. Mercury, then, is to enter into the treatment. By many it is given sparingly and with hesitation, and is soon abandoned for the iodide of potassium. The majority of practitioners, however, rely pretty fully upon mercury in the early secondary stage, combine it with the iodide of potassium, under the name of "mixed treatment," in the intermediate period, and trust to the iodide alone in the management of tertiary lesions. Personally we use mercury in all stages, never employing the iodide if it can be avoided.

An interesting and at the same time important question arises at this point: How does mercury cure syphilis? Is it by some alteration of the constitution of the blood, and the consequent induction of nutritional changes, or is it by direct local action of the drug upon the lesion itself? The former is the more prevalent belief, but the latter, we think, is nearer the truth. Mercury cures the lesions by its particles being brought directly in contact with them, and, *cœteris paribus*, the larger the quantity of mercury that can be made thus to act, the sooner the cure, *provided* the remedy be used in such a way as not to exhibit its own peculiar poisonous effects. Mercury, like every other specific remedy, as soon as it poisons, ceases to cure, and becomes, in addition, a very ready and potent agent of mischief. By these two principles the treatment is to be guided.

If the lesion under notice be a chancre (not a chancroid) it does not require cauterization, but instead a local mercurial application, and for this purpose we know of nothing better than the *Hydrarg. Oxid. Nigr. Hahn.* This is a black powder, and should be freely dusted upon the sore, and renewed as often as may be necessary. If this salt cannot be readily obtained, ordinary black or yellow wash will answer almost as well.

If, in addition to the chancre, there is induration of the inguinal and post-cervical glands, and the diagnosis is absolute, give mercury internally. For this purpose we prefer the protoiodide given in pill or in trituration. Six centigrammes, or one grain given in divided doses, may be considered the average maximum daily allowance. The following formulæ will be found convenient:

℞. Hydrarg. protoiod.	1.	gr. xv.

Make 100 pills.

℞. Hydrarg. protoiod.	1.	gr. xv.
Sacch. lactis.	9.	gr. cxl.

M. Divide into 100 powders. Dose six powders or less per diem.

In some cases it will be found that the protoiodide, given as above, will produce symptoms of gastro-intestinal irritation. Under these circumstances the dose must be diminished, or the drug combined with a sedative, as follows:

℞. Hydrarg. protoiod.	1.	gr. xv.
Ext. lactucarii.	4.	ʒj.

M. Make 100 pills.

Or,

℞. Hydrarg. protoiod., Pulv. opii	āā 1.	gr. xv.
Sacch. lactis.	8.	ʒij.

Mix thoroughly, and divide into 100 powders.

Or,

℞. Hydrarg. protoiod.	1.	gr. xv.
Pulv. Ipecac. co.	9.	gr. cxl.

M. Make 100 powders.

Of these pills or powders, two may be taken after each meal until there is evidence of mercurial action upon the gums. At the very first suspicion of salivation, however, the quantity must be diminished to four, three, or even two pills or powders per diem. The degree of tolerance of mercury varies with different patients, and it is frequently necessary to skirmish for a few weeks, increasing or diminishing the quantity until the appropriate dose is ascertained. When this is determined it should be continued without interruption, if possible, for at least eighteen months. That this is frequently possible, we know by experience; that it is desirable we are fully convinced. At the end of this time, if the patient has had no syphilitic symptoms other than those for which he first came under treatment, or if he has been for a considerable time without specific manifestations, all medication may be abandoned, in the hope that the disease has been completely eradicated. In a considerable proportion of cases this hope is not an unreasonable one. This prolonged mercurial treatment is of course not to be thought of unless the diagnosis of syphilitic chancre is absolute. In cases of doubt as to the nature of the sore, it is better to wait for the development of secondary symptoms. When these appear the course just mentioned should be at once adopted, and faithfully followed up for the period mentioned with as few interruptions as possible. If there be mucous patches or other lesions about the mouth, the trituration is to be preferred to the pill, insomuch as the finely divided drug is thus brought into immediate contact with the lesions themselves, and by its local action hastens their removal. The continued use of mercury, as here recommended, is possible and practicable in a certain number of cases. In others, however, it cannot be strictly carried out. The causes of failure are usually due either to negligence on the part of the patient, or to too large doses of the drug in the beginning. A great many patients, especially those of the lower classes, abandon all treatment as soon as the manifestations for which they sought relief have disappeared. The almost inevitable result is, sooner or later, a relapse. This is again relieved by temporary treatment followed by another relapse, until actual symptoms of the tertiary period appear in such a form as to demand the use of iodide of potassium or other agents for their relief. On the other hand, if mercury is pushed too freely at the start, mercurial symptoms about the mouth and even decided salivation may suddenly develop. This state of affairs is to be greatly deprecated, because, in the first place, it necessitates interruption of the treatment, and, in the second place, salivation is a positive evil, besides being a source of great annoyance to the patient. If salivation should occur, the mercury must be absolutely withdrawn, and sulphur in small doses, frequently repeated, is to be substituted. In addition, the mouth should be frequently washed with tepid water to which a little chlorate of potash and tincture of myrrh have been added. Belladonna and its alkaloid are also of service. Under the use of these means the salivation will usually cease in a few days and buccal irritation gradually subside. The mercury should not, however, be immediately resumed. It is better to give some form of iron for a short time. *Ferrum redactum*, or some of the protosalts, are to be preferred to other preparations of this metal. When the general condition has been restored by the tonic properties of the iron, the mercury is to be cautiously resumed, and continued in such a way as not to bring about a repetition of the former trouble. The regulation of the dose of mercury appropriate to each particular case cannot receive too much attention at the hands of the physician. The effort should be to give the largest amount that can be borne, without the production of gastric, buccal, or other irritation; in other words, to overwhelm the disease without detriment to the general condition of the patient. Besides the grosser signs of excess just mentioned, the patient's spirits, strength, and weight will form useful data for the estimation of the proper amount to be given. If, under a mercurial course, mental depression and debility, which are frequent accompaniments of syphilis, are diminished or relieved, the drug is doing good. On the other hand, if they are increased, something is wrong, and the probability is that the dose is too large. In cases of doubt it is safer to err on the side of small doses than risk the larger. In the former case, recovery may be a little retarded, but no positive injury inflicted ; in the latter, recovery will be equally retarded, with positive injury in addition. As the same dose is not suitable in all cases, and as there are no positive data by which it can be determined in advance, its proper adjustment necessitates close observation, experience, and judgment.

It will be noticed that thus far there has been no employment of the iodide of potassium.

During the past eight or nine years we have followed substantially the treatment above described in all cases that have come to us early in the disease, and in but a single instance (except in those in which the iodide had been previously given) have we found it necessary to employ it. In general, after the disappearance of the lesions for which the patient has come under treatment, subsequent developments have been trifling and unimportant, such as a few scattered papules upon the body or scalp, and milk-spots and superficial erosions about the mouth. In no case, so far as our notes and recollection serve, have iritis, pustular or ulcerative lesions occurred.

Although the protoiodide is the only preparation of mercury of which we have yet spoken, it must not be supposed that it is the only one that is of service in early syphilis; on the contrary, it may be replaced, and frequently to advantage, by calomel, or protoxide of mercury, or by the metal itself in a state of minute subdivision, as found in blue pill, and in triturations with chalk or milk-sugar.

The foregoing applies simply to cases of syphilis that come under treatment in its early stages. In many instances, however, we will be consulted at a later period, and for lesions of a more serious character. This will often compel us to modify the treatment, and to introduce an additional therapeutical agent, namely, the iodide of potassium. This drug is extensively employed in syphilis, more frequently, we think, than it should be. Its popularity is due principally to the fact that it exerts a very prompt control over certain manifestations of the disease, and to the idea possessed by many that its effects upon the system are less injurious than those of mercury. This opinion we cannot altogether share. The iodide, however, has its special functions to perform, and under certain circumstances is indispensable; but before employing it we must understand exactly what it is capable of effecting. Mercury cures the disease, and by so doing removes the cause that produces the various symptoms. The iodide, on the other hand, relieves certain symptoms with wonderful rapidity, but does not eradicate their cause. In other words, relapses are far more frequent after its use than after the judicious employment of mercury. The conditions to which it is appropriate are affections of the periosteum and bones, extensive ulcerations, gummata, and affections of the nervous system. In cases accompanied with severe periosteal pains, the aid of the iodide may be invoked for the relief of this symptom, a relief which, if given in sufficient doses, it usually affords. In cases of extensive ulceration, or other processes involving the integrity of important organs, and where there is not time to wait for the more tardy action of mercury, or when this latter is contraindicated by the patient's general physical condition, the iodide should be used promptly and freely. The cutaneous eruptions and ulcerations pertaining to the tertiary period disappear more rapidly under the use of the iodide singly, or combined with the mercury, than under the use of mercury alone. The size of the dose will depend somewhat upon the patient's previous familiarity with the drug. The less he has taken on former occasions the less he will probably need, and *vice versa*. In the former case a dose of 0.30—0.60 (five to ten grains), three times a day, will usually be sufficient. It should be given in an abundant menstruum, either water or some simple syrup agreeably flavored, or with compound syrup of sarsaparilla, or with compound tincture of cinchona, if a tonic is needed. It is generally advisable to give mercury in addition. This may be ordered separately, or in combination with the iodide. In the latter case the vehicle or menstruum should not contain an alkaloid, as the probable result would be the precipitation of an iodo-hydrargyrate of the alkaloid. In this case, unless the mixture is well shaken, the patient will get little or no mercury in the earlier doses; but, as he reaches the bottom of the bottle, will get more mercury than he bargained for. This accident we have several times known to occur. In early syphilis the proto-salts of mercury are usually preferred; but in late disease, especially when used with the iodide, it is the almost universal custom to employ the persalts, the bichloride and biniodide being the favorites. These may be given ordinarily in doses of two to five milligr. (gr. $\frac{1}{32}$—$\frac{1}{12}$) three times a day. Under this treatment the lesions under consideration will usually improve in a satisfactory manner. As soon as they have disappeared, the iodide should be discontinued, and a persalt of mercury be given in small doses (one to three milligr.) for a considerable period. If the patient is already habituated to the use of the iodide before coming under treatment, somewhat larger doses than those mentioned may be required.

In cases of extensive or advancing ulceration about the tongue, soft palate, or fauces, the iodide is required, and in considerable doses. No definite dose can be named. The drug must be pushed until it checks the progress of the lesion, which it will usually do, if enough of it is given. As soon, however, as the trouble is checked, and fully under control, a persalt of mercury should be prescribed, and the iodide gradually diminished and finally abandoned, the mercury being continued for a few months longer.

In lesions of the nervous system also, our chief dependence is upon the iodide. If the symptoms are not urgent the drug may be given in moderate doses of about a gram (15 grs.) three times a day. If the trouble, however, is grave, the dose must be rapidly increased. When the symptoms are finally mastered, the iodide is gradually diminished and supplemented by mercury.

From the above it will be seen that mercury and iodide of potassium both have important rôles to fill in the management of syphilis. Their properties and powers, however, are not identical, as many seem to think, and consequently they are not interchangeable. They cannot be given one for the other, in the hope of attaining the same end; but each must be used according to the special indications of the case, the iodide to relieve symptoms and lesions in the later periods of the disease, mercury to cure the disease itself in all its stages. The foregoing are the principal agents to be employed in the specific treatment of syphilis, but a few words are necessary in regard to their administration. As a rule, mercury is given by the mouth; when, however, the stomach or bowels are particularly irritable, the drug may be used hypodermically, or by fumigation. In the former case, the bichloride or bicyanide may be employed; in the latter, calomel.

In *iritis* dependent upon syphilis, specific treatment must, of course, be employed; mercury, if the eye trouble appears early, mercury and iodide of potassium, if it comes on later. In addition it is absolutely necessary to dilate the pupil, and to keep it dilated, so as to prevent, as far as possible, adhesions between the iris and the capsule of the lens. To accomplish this a solution of atropine or the extract of belladonna should be frequently applied to the eye.

In affections of the hard palate and of the nose, especially ulcerations connected with carious bone, the chlorides of gold, and of gold and sodium, appear to possess specific and directly curative powers. These salts should be given in doses not exceeding one milligr. (gr. $\frac{1}{64}$) well diluted, two or three times a day. Larger doses are apt to disorder the stomach and aggravate the local disease. The results attained with gold in the conditions specified have been surprisingly prompt and exceedingly gratifying. *Per contra*, we have not been able to obtain as good results from it in other syphilitic manifestations. The bichloride of platinum, in the same doses as gold, sometimes affords relief in the nocturnal bone pains, and when it does so is to be preferred to the iodide of potassium. Mezereon, guaiac, sarsaparilla, stillingia, are often useful adjuvants, but probably do not possess any specific power over the disease.

Local treatment.—If the views previously expressed to the effect that mercury cures syphilis in consequence of the particles being brought into direct contact with the lesion, are true, it is to be expected that local treatment, when practicable, will be exceedingly useful, and play an important part in the management of the disease. These expectations are fully verified by clinical experience.

The local treatment of the chancre has already been considered. The mucous patch, whether of the genitals or of the mouth, requires local applications. The most efficient agent for this purpose is the acid nitrate of mercury. One or two applications are usually sufficient to dissipate patches of ordinary size. If this is not available, the bichloride of mercury may be employed in a plain one per cent. solution, or dissolved in collodion. Milder preparations, *e.g.*, calomel, blackwash, etc., are less painful and less efficient. Nitrate of zinc in stick form, though not acting in a specific manner, will cause rapid disappearance of the lesion. Papular and tubercular lesions, especially about the face and other exposed parts, demand speedy removal. This may be best effected by daily frictions with *ungt. hydrarg.*, *ungt. hydrarg. ammon.*, or *hydrarg. oleat.* five per cent. In *ulcerative* lesions, the crusts should be removed, the ulcers well cleansed, and gently touched with *liq. hydrarg. nitrat.*, and afterward dressed daily with the protoiodide in ointment as follows:

℞. Hydrarg. protoiodidi..................	1.	gr. xv.
Cerati................................	30.	℥ j.
M.		

In many cases of extensive ulceration, or of inveterate disease, the most prompt results are frequently obtained by means of mercurial fumigation, by inunction with mercurial ointment, or by hypodermic injection. One or the other of these methods is of course imperatively demanded when the administration of mercury by the mouth produces irritation of the gastro-intestinal tract.

The points that we desire to insist on in the treatment of syphilis are that mercury is, *par excellence*, the *curative* drug in syphilis, and should be used in small doses for a long continued period; that iodide of potassium is not curative, but simply capable of relieving certain symptoms, which it sometimes does with wonderful promptness. That mercury probably acts by its particles being brought directly in contact with the lesions through the medium of the circulating fluid, and hence should be used locally whenever it is possible. These views were first publicly urged by us in 1876 (**87**, 68 *et seq.*), and were not those generally held by the profession, either here or abroad, the majority of whom appear to regard the iodide as an equally important, if not more useful and less dangerous, remedy than mercury. Since then, Keyes and others in this country have announced substantially the same propositions.

Until quite recently I was not aware that Plenck,* more than a hundred years ago, had expressed himself as follows:

"Mercury alone is sufficient for destroying venereal poison.

"Mercury, when topically applied to venereal parts, acts sooner and more certainly on the poison which topically exists in that part to which it is applied.

"Therefore mercury ought to be used both internally and externally at the same time.

"Mercury more especially destroys the venereal virus in the solids of our body. . . . .

"Therefore, during and after the use of mercury, other remedies are indicated, and ought to be prescribed for venereal patients, according to the variety of their symptoms."

Besides the drugs mentioned, the following may be considered:

Acid. Nitric., 9; *Acid. Pyrogallic.*, 10; *Ammonii Iodidum*, 15; *Amyli Iodidum*, 17; *Arsenic*, 25; *Bignonia Caroba*, 33; *Calotropis*, 36; *Dulcamara*, 51; *Hura Brasiliensis*, 58; *Pilocarpus*, 86; *Pilocarpiæ Iodohydrargyras*, 87; *Potassii Bichromas*, 91; *Sanguinaria*, 102; and *Zinci Iodidum*, 117.

TRICHOPHYTOSIS.

SYN.: Tinea trichophytina—Ringworm.

Definition and description.—Trichophytosis is a contagious phytoparasitic affection, characterized by the development of circular patches, commonly known as ringworm, on various parts of the surface of the body. These patches increase centrifugally, and are accompanied with profound alterations of the hair on the affected parts.

Etiology.—Trichophytosis depends on the lodgment and growth of a parasitic fungus called the *Trichophyton Tonsurans*, the discovery of which is due to M. Gruby, in 1842.

The fungus itself consists of spores and mycelial tubes. The spores are mostly round and much smaller than those of the *Achorion Schönleinii* described in connection with Favus, and the mycelium is usually not so abundant. The favorite, if not exclusive, seat of the parasitic growth is in the hairs and hair-follicles. After it has gained a lodgment in the follicle, it almost immediately invades the hair-root, infiltrating it abundantly among and between the longitudinal fibres of the hair. This infiltration proceeds in an outward direction, until it has extended a short distance (one-sixteenth to one-eighth of an inch) beyond the surface of the skin. The spores separate the fine fibres of the hair, and by pressure force them apart. The portion of hair just without the follicle, and no longer possessing the support of the follicular walls, yields to the rupturing force of the parasite and breaks off, leaving a ragged and brush-like extremity protruding from the follicle. If a hair be extracted and examined under the microscope, it will exhibit the appearances shown in the annexed cut, Fig. 31.

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* *Op. cit.* See note to p. 61 of this book.

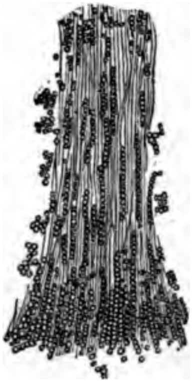
FIG. 31.—Portion of a hair infiltrated with the spores of the trichophyton tonsurans.

By the aid of these spores the disease is conveyed from one to another under circumstances that will be noted later. The disease is met with in some of the lower animals, and may be conveyed from them to man.

Varieties.—There are four principal varieties of Trichophytosis founded on the different appearances and course presented by the disease according to the locality which is invaded by it. These varieties are known as *Trichophytosis capitis*, *Trichophytosis barbæ*, *Trichophytosis corporis*, and *Trichophytosis genito-cruralis.* As the varieties differ in many essential respects both as to appearance, course, and appropriate treatment, they will be separately described.

TRICHOPHYTOSIS CAPITIS.

SYN.: Tinea tonsurans; Herpes tonsurans.

Definition and description.—Trichophytosis capitis is a disease of early life, occurring among infants and children, and never, so far as the author's experience goes, among adults. It is characterized by the appearance upon the scalp of one or more small, round, white, scaly patches, apparently deprived in part or wholly of hair. The patches extend in a centrifugal manner with greater or less rapidity. They increase in size, and others appear in the neighborhood, and if the disease is unchecked, soon fuse together until more or less of the scalp is involved, when the appearances noticed in the smaller patches are observed over the whole surface. The ultimate result, if unchecked by treatment, is involvement of the entire scalp, with destruction of the hair-follicles and permanent loss of hair.

On close inspection, the apparently bald portions of scalp in the early stages of the disease are found in reality to be covered with innumerable short hair-stumps projecting a little above the surface. The appearance of this short stubble is very peculiar. The broken hairs do not resemble closely clipped healthy ones of the same length, but are lustreless, and of lighter color than the neighboring normal hair. Their extremities are rough and often brush-like, due to splitting up of the shaft, and separation of the fibres by the spores of the *trichophyton.* Sometimes a few hairs of normal length will be scattered over the affected surface.

The affection is exceedingly contagious, the most so of any of the phyto-parasitic diseases of the skin, and is frequently conveyed by the use of hats, brushes, etc., which have been previously used by persons affected with the disease. It is also probable that the spores may be conveyed some little distance through the air, as the affection sometimes spreads rapidly in schools, even where ordinary precautions are employed.

If a patch commence near the border of the scalp, by farther extension it may spread down upon the forehead, temples, or neck, in which case the portion beyond the scalp presents the features peculiar to *Trichophytosis corporis.*

Diagnosis.—In its early and advancing stages little or no difficulty should be experienced in the diagnosis. The circular shape and the broken hairs are sufficiently characteristic, and are not met with in any other affection of the scalp. In the stage of decline, however, especially after a case has been subjected to treatment, recognition of the affection may be more difficult. Under these circumstances the microscopical appearances of the hairs will be sufficient to determine the matter.

Prognosis.—This variety of trichophytosis is very difficult to cure, especially if the disease have gained any headway. It can, however, be cured by appropriate and persistent treatment.

Treatment.—The principle that underlies the treatment of trichophytosis capitis is the same that prevails in the management of Favus. This is to destroy the fungus *in situ.* Of the various methods that have been proposed to accomplish this end, the following two may be regarded as the most reliable.

The first method may be designated as that of BAZIN. It may be carried out as follows : Epilate the affected patches as carefully as possible, and apply a solution of corrosive sublimate, as in the treatment of favus. Owing, however, to the disorganized and fragile condition of the hair-stumps, thorough epilation is exceedingly difficult, as in many cases the slightest traction on the stumps causes the root to break, leaving a portion of it remaining in the follicle. Epilation, however, must be attempted and carried out with as much gentleness and care as possible, and after the removal of as many hairs as is practicable, the parasiticidal lotion should be employed. As, in all probability, many of the roots of fractured hairs will remain in their follicles after the first attempt at epilation, it will be necessary to wait until they have grown out again and are capable of being extracted, parasiticides being employed in the interim. Epilation must then be renewed, and as often as necessary. These cases require the closest attention, as the disease is rarely eradicated, when extensive, in less than from three to six months. Premature suspension of treatment will inevitably be followed by relapse.

The second method of treatment, and one that is perhaps more successful than that just given, is the one recently (1876) recommended by Ladreit de Lacharrière. It consists in the application of croton-oil to the affected surface in such a manner that a pustular inflammation of the follicles shall be induced. This loosens the hair and destroys the fungus. A careful trial of this method has satisfied me that it is of decided service, but it is rendered still more efficient by combining it with epilation. It may be carried out as follows : Melt together equal parts of croton-oil and white wax. When the mass is fluid pour it into a hollow cylinder made of paper, and about one-half inch in diameter. When cold it acquires a convenient and suitable consistency. Epilation is then resorted to, and in as thorough a manner as possible, after which the mixture of wax and oil is rubbed into the patch. This will usually excite the requisite degree of inflammation. After this has subsided careful microscopical examination of the hairs should be made, and the epilation and oil again employed, if necessary. In very young children the foregoing application will prove too irritating, and its strength should be reduced. In which case equal parts of croton-oil, cocoa-nut-oil, and white wax, melted together, will give a stick of suitable consistence and milder in its action. By the persistent and intelligent use of these means the trichophytosis will be ultimately cured.

TRICHOPHYTOSIS BARBÆ.

SYN.: Mentagra parasitica; Sycosis parasitica.

Definition and description.—This is an affection due to the lodgment and development of the trichophylon tonsurans on the hairy parts of the face in adult males. It appears upon the cheeks, chin, and upper lip, and at first as a very slightly elevated, circular, reddish patch, upon which a few scales may be perceived. This patch extends centrifugally, and if the hairs are sparse exhibits a tendency to assume a normal aspect at its centre, thus forming a ring, whose advancing periphery is a little raised above the surface. If, however, the hairs are plentiful, it mows them down as in trichophytosis capitis, and leaves nothing but a bushy stubble. Later, other and similar patches appear which, by mutual extension, may unite with each other, modifying the typical circular form of the lesion.

If the disease last for any length of time, additional phenomena may be presented. These are due to secondary inflammation excited by the presence of the parasite, and may consist in papules, tubercles, pustules, small abscesses, and even ulceration, and may be present to such an extent as to render the affection exceedingly disfiguring. The extent and severity of these lesions will vary with the individual peculiarities of the patient; some cases presenting little more than the special trichophytic appearances, while others exhibit the secondary lesions to a marked degree.

Trichophytosis barbæ, like the other varieties, is exceedingly contagious, and is frequently transferred from one to another by the indiscriminate use of unclean shaving appliances. It may also be contracted from persons suffering from other forms of trichophytosis.

Diagnosis.—The only real difficulty presented in diagnosis is the differential diagnosis between it and an eczematous inflammation of the hair-follicles. The history of the case, that is, the information that the affection, at its commencement, exhibited itself in the form of well-defined circular lesions, is strong presumptive evidence that it is the parasitic one, and not an eczema barbæ, which is usually more diffuse. In extracting the hairs in trichophytosis they will frequently break, leaving a portion of root in the follicle, in strong contrast to the hairs in eczema barbæ, which, as a rule, can be pulled out without fracture, and frequently accompanied with their root-sheaths. In addition, the microscope affords a very ready means of diagnosis.

Prognosis.—The prognosis is good. Advanced cases may, and usually are tedious, but are perfectly curable under appropriate and persistent treatment.

Treatment.—This consists in epilation and the application of an antiparasitic lotion or ointment. The tincture of iodine, the bichloride lotion, or a mercurial ointment, will usually prove sufficient. Treatment should not be abandoned until all chance of relapse is past.

TRICHOPHYTOSIS CORPORIS.

SYN.: Tinea circinata; Herpes circinatus.

Definition and description.—This affection is due to the development of the trichophyton on portions of the surface that are but poorly supplied with hair, or rather on portions on which the hairs are exceedingly minute and rudimentary, as upon the greater part of the body.

It commences as a slightly scaly erythematous spot. This erythema sometimes appears to be on a level with the surrounding surface, but in other cases quite an appreciable degree of elevation may be perceived. As the spot enlarges it shows a tendency to heal in the centre, so that in a short time we find a reddened ring circumscribing apparently healthy integument. The ring enlarges indefinitely until it may have attained a diameter of several inches. At last it begins to die out at various points along its periphery, making the ring incomplete, until finally it disappears entirely. In the meantime, however, other rings may arise elsewhere, and exist in any number, and, if contiguous, may coalesce at some point of their circumference and form a figure of eight, or if several rings unite various irregular figures may result.

Diagnosis.—As a rule very little difficulty need be experienced in the diagnosis of this affection. Occasionally a circinate Psoriasis or a Syphilide may present somewhat analogous appearances, and sometimes even an annular erythema. The history of the case, however, will generally suffice to clear up any doubt; and where it does not, appeal may be made to the microscope.

Prognosis.—In cases occurring in Europe and America the prognosis is almost always good, the affection being readily curable. In some hot climates, however, it flourishes very luxuriantly and is frequently very obstinate.

Treatment.—Under ordinary circumstances the treatment of trichophytosis corporis is exceedingly simple, a few applications of the tincture of iodine being usually sufficient to remove it. If the color of the iodine is objected to, applications of bichlöride, or of mecurial or sulphur ointment, may be employed instead.

TRICHOPHYTOSIS GENITO-CRURALIS.

SYN.: Eczema marginatum.

Definition and description.—This affection is located in the genito-crural region, as its name implies, and usually commences as a slightly elevated patch at the upper part of the thigh near the scrotum. As the patch increases it pales in the centre, forming a ring whose advancing border is sharply defined, and more elevated than the other portions. As the ring increases in size it may extend to the scrotum, descend for some distance upon the thigh or mount upon the abdomen. A similar ring sometimes forms on the scrotum where it lies in contact with the thigh. Not unfrequently the other thigh and other side of the scrotum becomes affected in the same manner, thus giving the affection a somewhat symmetrical appearance. The natural moisture of the parts is increased by the irritation of the fungus, and together with the macerated scales, and perhaps crusts, may give the eruption somewhat the appearance of an eczema. As the affection advances, the hairs become disorganized as in the other varieties of trichophytosis, and papules, vesicles, and pustules may occur.

Diagnosis.—The only affections with which it is possible to confound the one under consideration, are Psoriasis, Syphilis, and Eczema. As regards the first two, the history will usually suffice. Its close resemblance to eczema, however, led to its receiving at one time the name of *eczema marginatum*, and for some time it was a much debated question as to whether the affection were in reality an eczema or a trichophytosis. It is now almost universally conceded to be the latter, but that cases of eczema sometimes so closely resemble it that a practiced eye alone is able to distinguish the one from the other. The microscope, however, may be appealed to as a last resort.

Prognosis.—The prognosis is usually good, the disease being curable, though sometimes tedious. If the parts be very hairy, epilation may be necessary, though I have never found it so, having thus far secured satisfactory results from the use of either ammoniated mercury or the yellow sulphate of mercury in ointment, either of which may be used in the proportion of one part of drug to twenty or thirty of excipient.

Having considered the varieties in detail we revert to the disease in general. The different varieties exhibit certain predilections as regards age and sex. Thus T. capitis occurs specially in children and young persons, the oldest subject in which I have encountered it being seventeen years of age; T. barbæ, for obvious reasons, occurs only in adult males; T. corporis may be met with in both sexes and at all ages; and T. genito-cruralis I have met with only in adult males, but know of no reason why it should not occur in adult females. Two or more varieties may coexist in the same patient, as for instance, T. capitis and corporis in children, and T. barbæ, T. corporis, and T. genito-cruralis in adult males. In adult females I have met with T. corporis alone. The disease sometimes affects the lower animals, having been met with in the rat, cat, dog, calf, and horse. I have personally seen it on the two latter named animals.

Besides the drugs already mentioned in connection with the treatment of Trichophytosis, the following have been recommended: *Acidum Aceticum*, 5; *Acidum Boracicum*, 6; *Acidum Carbolicum*, 7; *Acidum Chromicum*, 7; *Acidum Chrysophanicum*, 7; *Acidum Sulphurosum*, 11; *Ammonii Iodidum*, 15; *Anisum*, 18; *Calcii Sulphidum*, 35; *Cassia Alata*, 40; *Cocculus*, 46; *Cupri Acetas*, 49; *Juglans Nigra*, 71; *Kamala*, 72; *Oleum Oryzæ*, 79; *Potassa*, 93; *Sodii Hyposulphis*, 106; *Sodii Salicylas*, 107; *Terebinthina*, 110; *Tong Pan Chong*, 111.

URTICARIA.

Definition and description.—Urticaria is an affection usually characterized by the sudden development of white or red elevations called *wheals*, accompanied with heat and pruritus. Sometimes these symptoms precede the eruption, and the irritation to which they give rise leads to rubbing and scratching which speedily induce the lesions mentioned. Once out they may last a few [illegible] only, or persist for a few hours and even for a day or two. In some cases they may appear and disappear several times in a day. The wheals may be few or numerous, and the affection may terminate after the first crop have disappeared; more frequently, however, there are renewals of eruption for a few successive days, and in some cases this may be kept up for weeks or months, constituting chronic Urticaria.

The pruritus attending an outbreak of urticaria may be intense, and lead to the formation of unmistakable scratch-marks, and these indeed may be the only visible lesion at the time the patient visits the physician. In many persons suffering from urticaria, even in the absence of actual eruption, if the finger-nail or a pencil point be sharply drawn across the skin, a white line, soon becoming red and elevated, will appear. This lasts for a short time and then disappears. Almost every portion of the surface may be the seat of wheals, though I have never seen it on the palms or soles, or upon the scalp. In some cases the appearance of the wheals is preceded by œdema, especially of the face, hands, and feet. This may last a few days before giving place to the characteristic lesion. Occasionally the wheals may present a purplish appearance, due to extravasation of blood, constituting an Urticaria *hemorrhagica*. The stains last for some days after the wheals disappear. Severe urticarial attacks, and especially the œdematous form, are sometimes accompanied with febrile.

Diagnosis.—If the patient offers for inspection veritable wheals no difficulty can arise in determining the nature of the affection. If, however, the wheals are absent, and nothing but scratch-marks are present, the history of the case will give the necessary information. In the œdematous form the presence of a burning heat and pruritus will probably give a clue to what may be expected.

The eruption we are speaking of must of course not be mistaken for the somewhat similar one caused by contact with the common nettle (*Urtica dioica*, or *ureus*).

Prognosis.—The prognosis is always good, as the acute form can be brought to a speedy termination, and the chronic, as a rule, no less surely but more slowly; at least this has been my own experience of late years.

Etiology.—Urticaria is undoubtedly a reflex affection, and in acute cases can usually be traced to disorder of the gastro-intestinal tract from errors of diet—certain foods, as shell-fish, being specially liable in some persons to induce an attack. In chronic cases the gastro-intestinal and hepatic organs, and in woman, uterus and ovaries, are not unfrequently the starting-point of the trouble. In some instances, however, we will not be able to find sufficient evidence to convict any of the organs mentioned.

Treatment.—I have tried most of the methods mentioned by authors, and have settled down to the following which rarely disappoint me: In an acute attack give ten grains of Ipecac, or its equivalent in fluid extract every ten minutes, until free emesis is secured. As soon as the patient recovers a little from this, place him in a Turkish bath and let him remain there till free diaphoresis occurs, after which shampoo and dry him. This usually breaks up an attack. If it does not a second application of Ipecac and the bath will almost surely succeed. In the chronic form, careful search should be made for the exciting cause. If uterine, appropriate treatment must be adopted, together with Turkish baths. If the cause be gastro-intestinal or hepatic, a dose of calomel or blue-pill, followed by a suitable cathartic, should be first ordered. This should then be followed by small doses of almost any one of the efficient cholagogues, either alone or combined with small doses of arsenic or nux vomica. Turkish baths two or three times a week should also be taken. Outside of large cities the Turkish bath cannot be readily obtained. In default of this, free diaphoresis, by some other means, should be obtained. Perhaps Jaborandi would answer the purpose. This is simply offered as a suggestion, as I have had no experience with the drug in this connection. Since I have adopted the methods mentioned I have rarely found it worth while to make use of local treatment.

The following drugs have been recommended:

Acidum Sulphuric, 11; *Arnica*, 22; *Belladonna*, 32; *Quinine*, 45; *Colchicum*, 46; *Copaiba*, 47; *Ergota*, 52; *Potassii Cyanidum*, 93; and *Sodii Salicylas*, 107.

VITILIGO.

SYN.: Leucoderma.

Definition and description.—Vitiligo is an affection characterized by a localized disappearance of the cutaneous pigment. It becomes noticeable by the development of one or more small pigmentless spots, the color of which varies from a dead white to a faint rosy hue, the particular tint depending on the activity of the circulation in the affected part. The hair, if there be any on the spot, loses its color and becomes white. Surrounding these pale patches there is frequently a border characterized by increased pigmentary deposit which gradually shades off into the hue of the normal surrounding skin. The appearance of one spot is usually followed by the development of others. The spots usually, for a time, increase in size and unite with neighboring ones after forming an irregular patch of considerable extent. A considerable and even the major part of the surface may be thus invaded. With the exception of the loss of color, the affected portions do not present any other anomaly, but appear to preserve their various functions unaltered. The parts most frequently affected are, in my experience, the hands, face, neck, and genitals.

The affection, once developed, may continue for an indefinite period, or after a time come to a standstill and remain in that condition for many years. Occasionally, spontaneous recovery may take place, that is, the skin may recover its normal coloration. This I have seen, and in one patient alternations of vitiligo and normal color has occurred a number of times.

The affection affects the negro as well as the caucasian, and probably also the races of intermediate tint. I have never met with the affection in childhood in the white race, but have seen it from early adult life to old age.

Diagnosis.—The affection can be confounded with but one or two others. These are partial albinism and certain phases of macular Leprosy. Albinism, when complete, consists in a *congenital* diffuse absence of pigment; when partial, of congenital white spots surrounded by skin of normal hue. Vitiligo, on the other hand, is an *acquired* affection. The history of the case will be sufficient to determine the diagnosis. I have seen a case of macular leprosy in which there was a not very distant resemblance to Vitiligo, and I can readily imagine that there may be cases in which the likeness would be still more striking. The history of the case, however, and a close examination of the lesion, together with the fact that the white patches of leprosy are anæsthetic, will obviate any difficulties in the way of diagnosis.

Prognosis.—The prognosis is generally considered bad, that is, it has generally been considered impossible, in the majority of cases, to restore the lost pigment, and bring about a return to the natural color. Recent observations, however, lead me to take a more favorable view and to express the belief that remedial agents are capable, in some instances, of greatly improving the *condition* of the parts.

Etiology.—Nothing definite is known on the subject, and most of the speculations regarding it have not a sufficient basis of fact to even render them probable.

Treatment.—KAPOSI says (**97**, 2: 132): "We are not able to cure Vitiligo by any of the remedies or means at our disposal," but suggests that the striking contrast between the pigmented and unpigmented parts may be lessened by the use of such blistering preparations as will remove the color from the surrounding deeper pigmented parts. This is such an extraordinary proposition that we can hardly believe it is offered for serious consideration.

FOX (**61**, 402), however, says that "treatment is sometimes successful. A nutritious diet, a course of tonics—arsenic, iron, or the mineral acids—the correcting of any of the ill-effects of the action of malarial poison, residence in a cool locality, and the avoidance of fatigue, generally conduce to improvement. Locally, the use of friction and cold bathing, with iodine baths, are the best remedies."

Five years ago the author wrote (**87**, 374) as follows: "Personally I have never attempted any treatment whatever in cases of Vitiligo which have fallen under my notice," believing that treatment was useless. Since that time, however, I have had reason to change my mind, in consequence of having noticed the effect of strong sunlight on the patches in a patient under treatment for another affection. Briefly, the patient went fishing all day in a July sun with hands and wrists exposed, the backs of the hands being affected with Vitiligo. The exposed parts were sunburned, the vitiligonous patches very severely. After recovering from the effects of the sun, the patches were found to be very decidedly darkened in color, in fact tanned. This experience suggested to me the use of a burning-glass, the direct sunlight being concentrated on the white patches in such a manner that the heat is just supportable by the patient. This has, in one and the only instance in which I have tried it, proved of service.

Other cutaneous stimulants, as Hydrarg. bichloride, should, however, not be forgotten, and theoretical considerations would lead me to suggest the use of the galvanic current.

BARTON speaks of the use of butternut-juice (*Juglans cinerea*). This is an easily tried remedy, but whether of permanent benefit I do not know. If, however, it is desired, for any temporary purpose, to stain the patches a darker hue, the juice of butter-nut or hickory-nut "shuck" will be found, at the proper season of the year, a very available means to this end, as every country boy that has ever gone nutting well knows.

ZOSTER.

SYN.: Herpes zoster; Zona.

Definition and description.—Zoster is an affection characterized by the development of a cluster or clusters of moderate or large sized vesicles on a circumscribed patch or patches of inflamed skin. When there are two or more patches, they are arranged in a line, and the line follows the course of the principal nerve-trunk supplying the part. The portions of integument most frequently affected are those which are supplied by one of the intercostal nerves. The regions supplied by the branches of the fifth pair of cranial nerves, the sciatic, the anterior crural nerve, and the nerves of the shoulder, arm, and forearm, are also not unfrequently affected. The affection sometimes commences with a sharp neuralgic pain in one of the regions mentioned. A few days or weeks later the patient finds a little erythematous patch which is slightly sore, the pain being usually of a burning character. A few hours or a day later another patch of the same sort is met with over the course of the affected nerve, and then others, to the number of five or six, may appear. Shortly after its appearance the first patch becomes studded with vesicles from five to twenty in number, and the other patches in turn become affected in the same manner. When the eruption is fully out, the neuralgic pain sometimes disappears. In other cases it continues, and may even become more severe. The vesicles at first contain a clear and transparent serum, which, however, may soon become opaque. If the vesicles are ruptured the corium is exposed, and the fluid, if not removed, concretes into a brownish crust. If the vesicles are not ruptured they persist for a week or ten days, when their contents begin to undergo absorption, leaving an adherent scale or scab which finally drops off, leaving a reddened, and perhaps slightly depressed macule, that in time fades away. If the implication of the skin has been very superficial, no scar results. In many cases, however, the morbid action extends more deeply, and small, white, depressed scars remain to mark the site of the disease. If the neuralgia have persisted up to this time it may now cease, or, as in some cases, persist indefinitely, even for years.

If Zoster attack a scrofulous subject, or one of advanced age, or in a depraved state of health from any cause, the affection may, in its local manifestations, become much more severe. The vesicles, on rupturing, may be followed by ulcers of a more persistent character. Sloughing may occur and death has sometimes resulted from the disease.

One marked peculiarity of Zoster is the occurrence of the disease on one side only, the region supplied by the corresponding nerve of the other side being unaffected. Cases of double Zoster have been, though rarely, observed. Another peculiarity connected with the disease is the fact that it, like the eruptive fevers, attacks the patient but once in his life. A few cases of recurrent Zoster, however, have been recorded.

Diagnosis.—The diagnosis of Zoster is, as a rule, exceedingly simple. It can only be mistaken for one of the forms of herpes or hydroa. The characteristic features of Zoster have just been pointed out, and the differential diagnosis between it and herpes are discussed in connection with that disease.

Prognosis.—The prognosis of Zoster is usually good; that is, in the majority of cases the patient will entirely recover from the effects of the disease in from two to four weeks. In a few cases the persistent neuralgia may prove very difficult to relieve. In one instance I met with a localized pruritus, occupying the site of a previous Zoster, that resisted treatment for a year, when I lost sight of the case. In another patient whom I saw but once, severe and constant neuralgic pain had lasted for two years and a half, and, in addition, intense hyperæsthesia was present, so that the slightest pressure on the scars of the old eruption caused intense suffering. The sound integument between the scars was not hyperæsthetic. In aged and feeble persons, and those in depraved health, the prognosis should be guarded.

Etiology.—There is little doubt that in all cases of Zoster, the nerve which marks its distribution will be found in a diseased condition. In fact, whenever an opportunity has been afforded of examining the nerve this has been found to be the case. In cases of thoracic Zoster, besides the nerve-trunk, the ganglion attached to its posterior root has also been found diseased, and was apparently the starting-point of the trouble. In like manner the Gasserian ganglion has been involved in Zoster, affecting one or more of the branches of the tri-facial nerve. Zoster of the chest-walls has also been met with in connection with intra-thoracic morbid growths; and I have once seen it associated with a circumscribed dry pleuritis. An eruption of Zoster has also been noticed in patients during a course of arsenical medication; I have seen two such cases. From the foregoing it will be seen, that while there is no doubt as to the connection between the eruption and the underlying nerve, the nature of this connection is by no means clear.

Treatment.—If the patient be in other than apparent good health, the first care should be concerning his hygienic surroundings. Good air, food, etc., should be secured if possible, and if the patient suffers sufficiently to make repose in bed a desideratum, this should be not only permitted, but encouraged. In severe cases it should be insisted on, even if the patient thinks that his business or other duties require him to be up and about.

If febrile action is present, and it sometimes is for the first day or two of the eruption, this should be met by the use of Aconite or Gelsemium. The next point to be considered, is whether there are any drugs that, internally administered, are capable of aborting the eruption or of shortening the periods of its evolution and decline; of relieving the tenderness and soreness, or the accompanying neuralgia. The drugs that would naturally occur to us in this connection are those belonging to the class "*neurotica*," as aconite, caffein, gelsemium, ignatia, nux vomica, phosphorus, phosphide of zinc, rhus toxicodendron, quinine, etc. Of these phosphide of zinc is strongly recommended by THOMPSON, as capable of shortening the duration of the disease, and relieving the accompanying neuralgia. BULKLEY also uses the phosphide of zinc, but as he combines it with nux vomica (**110**, 2: 158) it is difficult to say which drug deserves the credit. Rhus toxicodendron is recommended by my friend, DR. STURGIS. I have also employed it, but am undecided as to its value. Quinine and nux vomica are advised by most writers on "general principles," and are doubtless of some value. Aconite and gelsemium I have personally found of value.

KAPOSI (**198**, 324) states that he has derived benefit from the use of Arsenic.

When the pain is excessive, and uncontrolled by other agencies, opium or hypodermic injections of morphia are indicated.

The *local* treatment of Zoster deserves attention. Electricity, both in the form of the constant and the induced current, has been credited with the power of aborting the eruption. My own experience on this point has not been decisive. Later, however, electricity, especially the constant current, is of service in connection with the neuralgia and in promoting the cicatrization of the ulcers, when they exhibit an atonic aspect. The principal indications, however, are to protect the vesicles from rupture, and to relieve the soreness that is usually present, and is increased by rupture and exposure of the unprotected and sensitive surface to friction from the garments, etc. The method most in vogue is to gently apply a coating of oil to the surface, and over that dust a thick layer of powdered starch. To the starch a little opium may be added, if necessary. Another good protector is collodion, which may be rendered sedative by the addition of a little fluid extract of belladonna, or the eruption may be covered with an adhesive opium or belladonna plaster spread upon linen.

If, on rupture of the vesicles or falling of the crusts, irritable or indolent ulcerations are exposed, they should be treated just as similar conditions, arising from other causes, would be.

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201. Dr. E. B. Bronson............New York.
202. “ L. D. Bulkley............“
203. “ F. P. Foster............“
204. “ G. H. Fox............“
205. “ E. L. Keyes............“
206. “ P. A. Morrow............“
207. “ F. Le R. Satterlee............“
208. “ F. R. Sturgis............“
209. “ R. W. Taylor............“
210. “ S. Sherwell............Brooklyn, N. Y.

FORMULARY.

INTERNAL.

Eczema.

		Grams.	
℞.	Violæ Tricol	30.	℥ j.
	Sennæ	15.	℥ ss.

M. Ft. chart. no. iv.

Make an infusion with hot water from each chart., and take one every night. H. G. P.

Eczema.

℞.	Lithii Benz	4.	ʒ j.
	Ferri. Benz	2.	ʒ ss.

M. Ft. chart. no. xx. One three times a day in water.

H. G. P.

Chronic Eczema in Children.

℞.	Ol. Morrhuæ	60.	℥ ij.
	Vitel. Ovi, no. i.		
	Liq. Sodii Arseniat	4.	ʒ j.
	Syrupi	10.	ʒ ij.
	Aquæ	120.	℥ iv.

M. Half a teaspoonful three times a day. Doyon.

Eczema.

℞.	Vini Ferri (B. Ph.)	45.	℥ jss.
	Syrup. Tolutan	15.	ʒ iij.
	Liq. Potassii Arsenit	4.	ʒ j.
	Aquæ Anethi	60.	℥ ij.

M. Dose, one to two teaspoonfuls. Wilson.

Eczema and Psoriasis.

℞.	Picis Liquid.,		
	Pulv. Sem. Anisi āā	10.	ʒ ijss.
	Magnesiæ Ustæ	q. s.	

M. Ft. pil. no. c. Two to ten pills daily. Miguet.

Eczema.

		Grams.	
℞.	Potassii Iodidi	0.50	gr. viij.
	Decoct. Ulmi	360.	℥ xij.
	Decoct. Dulcamaræ	120.	℥ iv.

M. Wineglassful at bedtime. NELIGAN.

Eczema Capitis.

℞.	Sulphur. Precip	2.	ʒ ss.
	Violæ Tricol.,		
	Mel āā	15.	℥ ss.

M. Teaspoonful four or five times a day. JAHN.

Chronic Eczema.

℞.	Sulph. Iodidi	1.—2.	gr. xv.—xxx.
	Sacch. Alb.,		
	Gum. Acaciæ,		
	Ol. Amygdal āā	q. s.	

M. Ft. pil. no. xx.

One pill night and morning with a glass of bitter infusion. Increase by one pill every six days, until four pills are taken daily.

DEVERGIE.

Eczema and Psoriasis.

℞.	Sodii Arseniat	0.10	gr. jss.
	Ext. Gentian	2.	ʒ ss.

M. Ft. pil. no. c.

Psoriasis.

℞.	Picis Liquid	8.	ʒ ij.
	Potassæ	4.	ʒ j.
	Aquæ	30.	℥ j.

M. Dose, ten to twenty drops, largely diluted.

Erythema Nodosum.

℞.	Magnes. Sulphat	1.30	gr. xx.
	Ferri Sulphat	.15	gr. ijss.
	Acid. Sulph. Dil	.30	♏ v.
	Tinct. Aurantii	1.	♏ xv.
	Aquæ	30.	℥ j.

M. This quantity three times daily. SPENDER.

Hyperidrosis.

℞.	Ext. Fl. Jaborandi	15.	℥ ss.
	Tinct. Cardamomi,		
	Syr. Pruni Virg āā	8.	ʒ ij.

M. Teaspoonful in half a wineglassful of water. ENGEL.

Purpura.

℞.	Ext. Ergotæ	0.30	gr. v.
	Glycerini	5.	ʒ j.

M. ♏ xii. to be injected twice daily. BURNESS.

Pruritus Vulvæ.

		Grams.	
℞.	Tinct. Caladii Seguini	1.	♏ xv.
	Syrupi	30.	℥ j.
	Aquæ	150.	℥ v.

M. A tablespoonful every hour. SCHOLZ.

Pruritus Scroti.

℞.	Tinct. Aconiti	4.	ʒ j.
	Aquæ	360.	℥ xij.

M. Tablespoonful three or four times a day. JENNER.

Rosacea.

℞.	Ext. Ergotæ	1.	gr. xv.
	Glycerini	2.	ʒ ss.
	Aquæ	8.	ʒ ij.

M. Inject ♏ ij.—iij. ELDRIDGE.

Lupus Erythematosus.

Iodide of Starch.

℞.	Iodinii	1.50	gr. xxiv.
	Amyli	30.	

Triturate the iodine with a little water, gradually adding the starch, and continuing the trituration till the compound assumes a uniform blue color, so deep as to approach black. The iodide should be dried with a heat so gentle as to run no risk of driving off the iodine, and it ought to be kept in a well-stoppered bottle. On no account should spirit be used in its preparation.

The dose is a heaped-up teaspoonful, in a draught of water or water-gruel, thrice daily; but it may be safely increased up to an ounce, in some cases. MCCALL ANDERSON.

Syphilis.

Liquor Auri Reducti.

℞.	Auri Chloridi	0.01
	Phosphori	0.005
	Alcohol Absolut	5.
	Aq. Destil	95.

Dissolve the chloride of gold in the water, and then add the phosphorus previously dissolved in the alcohol. H. G. P.

Syphilis.

℞.	Hydrarg. Chlor. Corr.,		
	Ext. Opii	0.20	gr. iij.
	Ext. Guaiac	3.	gr. xlv.

M. Ft. pil. no. xx.

Commence by one pill a day and gradually increase to three.

DUPUYTREN.

Syphilis.

℞.	Potassii Iodohydrarg	1.	gr. xv.
	Sacch. Lactis	10.	ʒ ijss.
	Syr. Acaciæ	q. s.	

M. Make 100 pills. One to five pills daily. HALLOPEAU.

Syphilis.

	Grams.	
℞. Hydrarg. Phosphat.	2.	ʒ ss.
Ext. Fumariæ	4.	ʒ j.

M. Make forty-eight pills. **Biett.**

℞. Antimonii Crudi,		
Ext. Dulcamaræ	āā	

M. Make two-grain pills. **Cazenave.**

℞. Dulcamaræ	15.	℥ ss.
Aquæ	720.	Ojss.

M. Boil until reduced to 480. = Oj.

Tablespoonful night and morning, gradually increased, watching its effect. **Cazenave.**

℞. Ammonii Arseniat.	1.
Aquæ	500.

M. Dose, from five drops upward. **Biett.**

℞. Graphites	2.	ʒ ss.

Ft. bolus. One, night and morning. **Weinhold.**

℞. Graphites	30.	℥ j.
Syr. Cort. Aurant.	q. s.	

M.

Make two-grain pills, of which fifteen are to be taken night and morning. **Weinhold.**

EXTERNAL.

Acne.

		Grams.	
℞. Sulph. Precip.,			
Potassii Bicarb.,			
Glycerini,			
Aq. Laurocerasi,			
Alcohol	āā	30.	℥ j.

M. **Hebra.**

Acne.

℞. Potassii Sulphid.,			
Tinct. Benzoin	āā	4.	ʒ j.
Aquæ		240.	℥ viij.

M.

Tablespoonful in a glass of water as a *Lotion* night and morning.

Guibout.

Acne.

		Grams.	
℞.	Sulph. Sublimat	2.	gr. xxx.
	Hydrarg. Ammoniat.,		
	Hydrarg. Sulphid. Nigr. āā	0.65	gr. x.
	Ol. Olivæ	8.	ʒ ij.
	Creosoti	0.25	♏ iv.
	Unguenti ad.	36.	ʒ ix.

M. **Blackfriars.**

℞.	Bismuthi Subcarb	10.	ʒ ijss.
	Talc. Venet	20.	ʒ v.
	Aq. Rosæ	70.	℥ ij. ʒ ijss.
	Spts. Odoratus	30.	℥ j.

M. **Hebra.**

Acne.

℞.	Hydrarg. Chlor. Corros	0.06	gr. j.
	Tinct. Benzoin	8.	ʒ ij.
	Aquæ	180.	℥ vj.

M. **T. Fox.**

Acne.

℞.	Sulphuris	4.	ʒ j.
	Glycerini	30.	℥ j.
	Aquæ	240.	℥ viij.

M. **Ringer.**

Acne and Chloasma.

℞.	Iodinii,		
	Potassii Iodid āā	4.	ʒ j.
	Glycerini	8.	ʒ ij.

M. **Kaposi.**

Acne.

℞.	Saponis Viridis	24.	ʒ vj.
	Alcohol	15.	℥ ss.
	Spts. Lavendulæ	4.	ʒ j.

M.

Acne and Rosacea.

℞.	Hydrarg. Ammon	3.	℈ ij.
	Hydrarg. Chlor. Mitis	5.	ʒ j. ℈ j.
	Ungt. Petrolei	30.	ʒ j.

M. **Bronson.**

Acne and Rosacea.

℞.	Sulph. Sublim	10.	ʒ ijss.
	Acid. Tannic	5.	ʒ j. gr. xv.
	Ungt. Petrolei	85.	ʒ iij.

M. **G. H. Fox.**

Acne and Rosacea.

		Grams.	
℞. Hydrarg. Chlor. Corr.,			
Ammon. Chlor	āā	0.10	gr. jss.
Emulsion Amygdal		120.	℥ iv.

M. CAZENAVE.

Tinctura Sulphuris.

℞. Sulphuris	4.
Alcohol	q. s.

Make a saturated solution which will contain about one per cent. of sulphur.

Alopecia.

℞. Tinct. Canthar.,			
Spts. Rosmarini	āā	4.	ʒ j.
Liq. Potassæ		6.	ʒ jss.
Aquæ		120.	℥ iv.

M. SACHSE.

Alopecia.

℞. Bals. Peruv	8.	ʒ ij.
Cerati	75.	℥ ijss.
Ol. Lavendul	0.75	♏ xij.

M. BURGESS.

Alopecia Areata.

℞. Terebinthinæ	2.	ʒ ss.
Alcohol	4.	ʒ j.

M. THOMSON.

Alopecia.

℞. Liq. Ammon. Fort.,			
Ol. Amygdal,			
Chloroformi	āā	10.	ʒ ijss.
Spts. Rosmarini		50.	℥ ss.
Ol. Limonis Ess		q. s.	

M. WILSON.

Alopecia.

℞. Tinct. Canthar.,			
Succi Limon	āā	2.	ʒ ss.
Ext. Cinchon		4.	ʒ j.
Medul. Oss. Bov		30.	℥ j.
Ol. Nuc. Jugland		1.25	℈ j.
Ol. Bergamot		q. s.	

M. STRUMPF.

Alopecia Areata.

℞. Sodii Salicyl	4.	ʒ j.
Acid. Carbol	2.	ʒ ss.
Ungt	30.	℥ j.

M. ECHORST.

Caustic.

		Grams.	
℞.	Antimonii Chlor	4.	ʒ j.
	Zinci Chlor	8.	ʒ ij.

M. Add a little flour at time of application, to make a paste.

CAZENAVE.

Caustic.

℞.	Acid. Arsenias,			
	Sulph. Morphiæ	āā	1.	gr. xv.
	Hydrarg. Chlor. Mitis		8.	ʒ ij.
	Gum Acaciæ		48.	℥ vj.

M.

Sprinkle thickly on a surface either raw or denuded of its cuticle by a blister.

ESMARCH.

Caustic.

Vienna Paste.

℞.	Potassæ,	
	Calc. Caustic	āā

M. When used mix with an equal weight of strong alcohol.

Caustic.

Ungt. Rochardi.

℞.	Iodinii	0.70	gr. xj.
	Hydrarg. Chlor. Mitis	2.	ʒ ss.
	Ungt	50.	℥ j. ʒ vj.

M.

Caustic.

Cômes Powder.

℞.	Acid. Arsenios	8.	ʒ ij.
	Hydrarg. Sulph. Rub	30.	℥ j.
	Carbonis Animalis	8.	ʒ ij.

M.

Caustic.

Llandolfi's Paste.

℞.	Brominii Chlor	12.	ʒ iij.
	Zinci Chlor	8.	ʒ ij.
	Antimonii Chlor	6.	ʒ jss.
	Auri Chlor	4.	ʒ j.
	Pulv. Glyceriz	q. s.	

Liquor Chromii Chloridi.

Dissolve hydrated sesquioxide of Chromium in hydrochloric acid to saturation. Evaporate to a syrupy consistence.

BULLOCK & CRENSHAW (*Mnfrs.*).

Caustic.

			Grams	
℞.	Liq. Chromii Chlor.,			
	Zinci Chlor	āā	4.	ʒ j.
M.				

If it is desired to employ the above as a paste it may be brought to a desirable consistence by the addition of an inert powder; or of arsenious acid, if we desire to increase its activity. H. G. P.

Caustic.

℞.	Hydrarg. Chlorid Corros	4.	ʒ j.
	Glycerini Amyli	12.	ʒ iij.
M.			

Depilatory.

℞.	Potassii Sulphid	6.	ʒ jss.
	Zinci Iodid	24.	ʒ vj.
M.			

Colan.

Depilatory.

℞.	Sodii Sulphid		3.	gr. xlv.
	Calcis Caust.,			
	Pulv. Amyli	āā	10.	ʒ ijss.
M.				

Make into a paste with a little water, and apply for one or two minutes.

Boudet.

Depilatory.

℞.	Barii Sulphid	6.	ʒ jss.
	Zinci Oxidi	24.	ʒ vj.
M.			

Mix with water to form a paste, and apply for three minutes and then wash off. McCall Anderson.

Bromidrosis Pedum.

℞.	Pulv. Alum. Exsic	90.	℥ iij.
	Acid. Salicylic	6.—12.	ʒ jss.—iij.
M.			

Ainsworth.

Bromidrosis.

℞.	Silic. Hydrat	4.	ʒ j.
	Ungt. Aquæ Rosæ	36.	ʒ ix.
M.			

H. G. P.

Eczema.

℞.	Liq. Calcii Hypochloros	12.	ʒ iij.
	Ol. Olivæ	28.	ʒ vij.
M.			

Kopp.

Eczema.

℞.	Hydrarg. Ammon	1.	gr. xv.
	Glycerin. Amyli	30.	℥ j.
M.			

Muller.

Eczema.

	Grams.	
℞. Acidi Boracici	1.	gr. xv.
Aquæ	30.	℥ j.

M. **SQUIRE.**

Eczema and Pruritus Ani.

℞. Tinct. Ferri Chlor.	1.25	♏ xx.
Liq. Calcis	30.	℥ j.

M. **SQUIRE.**

Eczema Capitis.

℞. Hydrarg. Bisulphid., Hydrarg. Oxid. Rub. āā	0.36	gr. vj.
Creosoti	0.12	♏ ij.
Unguenti	30.	℥ j.

M. **BLACKFRIARS.**

Eczema.

℞. Plumbi Acet	0.60	gr. x.
Zinci Oxid	1.25	gr. xx.
Hydrarg. Chlor. Mitis	0.60	gr. x.
Ungt. Hydrarg. Nitrat	1.20	gr. xx.
Ol. Palmæ	15.	℥ ss.
Ungt. Benzoini ad.	30.	℥ j.

M. **BLACKFRIARS.**

In Squamous Eczema with slight thickening of the Skin.

℞. Olei Cadini	15.	℥ ss.
Glycerini	5.	ʒ j.
Ungt. Diachyl	80.	℥ ijss.

M. G. H. FOX.

Eczema of the Lips.

℞. Liquor Potassæ	4.	ʒ j.
Aquæ Rosæ	16.	ʒ iv.

M. G. H. FOX.

Eczema.

℞. Hydrarg. Bisulphid., Hydrarg. Oxid. Rub. āā	0.36	gr. vj.
Ungt.	30.	℥ j.

M. **STARTIN.**

Eczema.

℞. Calc. Hypochloros.,
Ol. Lini āā

M. **HEIBERG.**

Eczema.

	Grams.	
℞. Picis Liquid	8.	ʒ ij.
Potassæ.	4.	ʒ j.
Aquæ	20.	ʒ v.

M. **Bulkley.**

Fissured Eczema.

℞. Hydrarg. Nitras	0.05	gr. j.
Glycerini,		
Aquæ āā	15.	℥ ss.

M. **Hardy.**

Chronic Eczema.

℞. Plumbi Iodidi	0.75	gr. xij.
Glycerini,		
Chloroformi āā	5.	ʒ j.
Ungt.	30.	℥ j.

M. **Belcher.**

Eczema.

℞. Bismuthi Subnitrat	8.	ʒ ij.
Glycerini	30.	℥ j.

M. **Pardee.**

Eczema.

℞. Graphites	4.	ʒ j.
Emplast. Saponis	16.	ʒ iv.

M. **Weinhold.**

Eczema.

℞. Graphites	6.	ʒ jss.
Ungt.	10.	ʒ ijss.

M. **Weinhold.**

Fissured Eczema.

℞. Graphites	4.	ʒ j.
Lycopodii	36.	ʒ ix.

M. H. G. P.

Chronic Eczema.

℞. Ol. di Mais Guasto	4.	ʒ j.
Ungt.	36.	ʒ ix.

M.

Eczema.

℞. Thymol	0.50	gr. viij.
Ol. Amygdal.	4.	ʒ j.
Cerati	20.	ʒ v.

M.

		Grams.	
℞.	Liq. Plumbi. Acet	1.	♏ xv.
	Creosoti	0.30	♏ v.
	Tinct. Opii	1.	♏ xv.
	Unguenti	30.	℥ j.

M.

Ephelis.

℞.	Sulph. Precip	4.	ʒ j.
	Tinct. Benzoini	30.	℥ j.
	Aq. Rosæ	125.	℥ iv.

M.

V. Graefe.

Ephelis.

℞.	Hydrarg. Chlor. Mitis	1.	gr. xv.
	Ungt. Aquæ. Rosæ	15.	℥ ss.

M.

Corbel-Lagneau.

Ephelis.

℞.	Hydrarg. Chlor. Corros	0.50	gr. viij.
	Zinci Sulphat.,		
	Plumbi Acetat āā	2.	ʒ ss.
	Aquæ	250.	℥ viij.

M.

Hardy.

Erysipelas.

℞.	Plumbi Nitrat	1.	gr. xv.
	Aq. Lauroceras	2.	ʒ ss.
	Glycerini	15.	ʒ ijss.

M.

Firnat.

Erythema.

℞.	Ungt. Stramonii	30.	℥ j.
	Liq. Plumb. Subacet	2.	ʒ ss.
	Ol. Lini	120.	℥ iv.

M.

Foster.

Erythema.

℞.	Bismuthi Subnit	8.	ʒ ij.
	Glycerini Amyli	16.	ʒ iv.

M.

Guibout.

Ichthyosis.

℞.	Potassii Iodidi	4.	ʒ j.
	Ol. Pedis Bubuli	75.	℥ ijss.
	Glycerini	30.	ʒ j.
	Ungt	75.	℥ ijss.

M.

Lupus.

		Grams	
℞.	Acidi Chromici,		
	Aquæ āā		
M.			Squire.

Lupus.

℞.	Hydrarg. Iodidi Rub.	4.—8.	ʒ ij.—iv.
	Ungt.	8.	ʒ iv.
M.			Guibout.

Lupus.

℞.	Iodinii,		
	Potassii Iodidi āā	10.	ʒ ijss.
	Glycerini	20.	ʒ v.
M.			Kohn.

℞.	Iodinii,		
	Potassii Iodidi āā	15.	℥ ss.
	Glycerini	4.	ʒ j.
M.			McCall Anderson.

Lupus.

℞.	Iodinii,		
	Potassii Iodidi āā	4.	ʒ j.
	Glycerini	8.	ʒ ij.
M.			Richter.

Lupus.

℞.	Zinci Chloridi,		
	Zinci Oxidi āā		
M.			Squire.

Pruritus.

℞.	Picis Liquid.	8.	ʒ ij.
	Tinct. Opii	2.75	℈ ij.
	Ungt.	30.	℥ j.
M.			Girou.

Pruritus.

℞.	Acidi Carbolici	4.—8.	ʒ j.—ij.
	Glycerini	30.	℥ j.
M.			Bronson.

Pruritus.

℞.	Pulv. Amyli	24.	ʒ vj.
	Zinci Oxid.	12.	ʒ iij.
	Camphoræ	2.	ʒ ss.
	Pulv. Coc. Cact.	0.06	gr. j.
M.			McCall Anderson.

Pruritus.

	Grams.	
℞. Acid. Hydrocyan. dil	1.—2.	♏ xv.—xxx.
Glycerini	30.	℥ j.

M. Should not be applied to abraded surfaces. WARING.

Pruritus.

℞. Chloral Hydrat.,
Camphoræ āā
M.

Rub a little gently upon the part, and wash off when the smarting becomes severe. McCALL ANDERSON.

Pruritus.

℞. Camphoræ,		
Chloral Hydrat āā	4.	ʒ j.
Ungt. Aq. Rosæ	30.	℥ j.

M. BULKLEY.

Pruritus Scroti.

℞. Iodinii	0.75	gr. xij.
Potassii Iodidi	0.40	gr. vjss.
Alcohol	30.	℥ j.
Aquæ	150.	℥ v.

M. BAROSH.

Pruritus.

℞. Tinct. Digitalis	8.—16.	ʒ ij.—iv.
Glycerini	16.	℥ ss.
Aq. Rosæ	180.	℥ vj.

M. T. FOX.

Pruritus.

℞. Aconitiæ	0.06	gr. j.
Ungt.	4.	ʒ j.

M. SATTERLEE.

Pruritus Vulvæ.

℞. Pulv. Gum. Acaciæ	8.	ʒ ij.
Bals. Peruv	4.	ʒ j.
Ol. Amygdal	6.	ʒ jss.
Aq. Rosæ	30.	℥ j.

M. TAUSKY.

Pruritus.

℞. Iodinii	0.36	gr. vj.
Potassii Iodidi	1.30	℈ j.
Alcohol	36.	ʒ vj.
Aquæ	90.	℥ iij.

M. STRUMPF.

Pruritus Ani.

		Grams.	
℞.	Chloroformi	8.	ʒ ij.
	Glycerini	15.	℥ ss.
	Cerati	45.	℥ jss.
M.			WRIGHT.

Pruritus Ani.

℞.	Sodii Borat.	12.	ʒ iij.
	Morph. Mur.	1.	gr. xv.
	Acid. Hydrocyan. Dil.	15.	℥ ss.
	Glycerini	60.	℥ ij.
	Aquæ	160.	℥ vss.
M.			WRIGHT.

Pruritus.

℞.	Ammonii Carb.,		
	Plumbi Acet.	āā 4.	ʒ j.
	Aq. Rosæ	240.	℥ viij.
M.			PEART.

Pruritus.

℞.	Acid. Hydrocyan. Dil.	4.	ʒ j.
	Alcohol	56.	ʒ xiv.
	Mist. Amygdal. Amar	180.	℥ vj.
M.			WILSON.

Pruritus.

℞.	Hydrarg. Chlor. Corros	0.30	gr. vj.
	Spts. Rosmarini,		
	Alcohol	āā 30.	℥ j.
	Mist. Amygd. Amara	180.	℥ vj.
M.			WILSON.

Pruritus.

℞.	Plumbi Iodidi	0.75	gr. xij.
	Glycerini	5.	ʒ j.
	Chloroform	3.	♏ xl.
	Ungt	āā 30.	℥ j.
M.			MERCER.

Pruritus.

℞.	Liq. Plumbi Subacet.	4.	ʒ j.
	Tinct. Hyoscyami	8.	ʒ ij.
	Mist. Camphoræ (B. Ph.)	240.	℥ viij.
M.			WARING.

Pruritus.

℞.	Zinci Sulphat.	0.30	gr. v.
	Aquæ	30.	℥ j.
M.			JOHNSTON.

Pruritus.

		Grams.	
℞.	Chloral. Hydrat	4.—8.	ʒ j.—ʒ ij.
	Aquæ	240.	℥ viij.
M.			Vidal.

Pruritus.

℞.	Chloroform	8.	ʒ ij.
	Ungt	24.	ʒ vj.
M.			

Nævus.

℞.	Antimon. et Potas. Tart	4.	ʒ j.
	Ungt. Resinæ	8.	ʒ ij.
M.			Bateman.

Pernio.

℞.	Camphoræ	15.	℥ ss.
	Ol. Terebinth	60.	℥ ij.
M.			

Phthiriasis.

℞.	Pulv. Sem. Delphin	4.	ʒ j.
	Ungt	32.	℥ j.
M.			

Pityriasis.

℞.	Sulph. Sublimat	0.50	gr. viij.
	Tinct. Benzoini	2.	ʒ ss.
	Ungt. Aq. Rosæ	30.	℥ j.
M.			

Pityriasis.

℞.	Sulph. Sublimat	4.	ʒ j.
	Glycerini Amyli	20.	ʒ v.
M.			Guibout.

Pityriasis.

℞.	Hydrarg. Sulph. Flav	4.	ʒ j.
	Ol. Theobromæ,		
	Ol. Ricini,		
	Ol. Amygdal. Dulc. āā	80.	℥ iijss.
M.			Malassez.

Pityriasis Capitis.

℞.	Spts. Ammon. Aromat	30.	℥ j.
	Spts. Myrciæ	90.	℥ iv.

M. Shampoo. After drying apply:

℞.	Ungt. Hydrarg. Ammon	8.	ʒ ij.
	Vaseline	30.	℥ j.
M.			G. H. Fox.

Trichophytosis.

		Grams.	
℞.	Sulph. Sublim.,		
	Picis Liquid.,		
	Adipis Purific āā	60.	℥ ij.
	Cretæ Præperat	30.	℥ j.
	Ammon. Hydrosulph	2.	ʒ ss.

M. WILKINSON.

Lotion for Chromophytosis.

℞.	Sodii Hyposulphit	15.	℥ ss.
	Aq. Rosæ	100.	℥ iijss.

M. To be used after soap frictions.

Favus.

℞.	Calcii Sulphid	6.	ʒ jss.
	Collodion	30.	℥ j.

M. GAMBERINI.

Trichophytosis Capitis.

℞. Ol. Tiglii,
Ceræ Alb āā

M. Melt together and pour into a cylindrical mold.

H. G. P.

Trichophytosis and Chronic Eczema.

℞. Ol. Tiglii,
Ol. Cocos Nucif.,
Ceræ Alb āā

M. Melt together and pour into a mold. H. G. P.

Parasiticide.

℞.	Hydrarg. Chlor. Corros	0.10	gr. jss.
	Tinct. Benz	2.	ʒ ij.
	Aquæ	240.	℥ viij.

M.

Parasiticide.

℞.	Hydrarg. Chlor. Corros	0.50	gr. viij.
	Cupri. Acet	4.	ʒ j.
	Ungt	60.	℥ ij.

M.

Parasiticide.

℞.	Hydrarg. Sulph. Flav	1.	gr. xv.
	Ol. Amygdal Dulc	4.	ʒ j.
	Glycerini	5.	ʒ j.
	Ungt	45.	℥ jss.

M. BAZIN.

Psoriasis.

		Grams.	
℞.	Potassii Carb	1.	gr. xv.
	Ungt.	30.	℥ j.

M. DEVERGIE.

Psoriasis.

℞.	Acid. Salicylic	6.	ʒ jss.
	Alcohol	100.	℥ iijss.

M. PREISSMANN.

Vlemingkx' Solution.

Psoriasis, Scabies, etc.

℞.	Calcis Ustæ	250.	lb. ss.
	Sulphur Sublim	500.	lb. j.
	Aquæ	2,000.	O v.

Make the quicklime into a paste with a part of the water, add the sulphur and the rest of the water, and place the whole over the fire in an iron pot and stir with a wooden spatula till union of the sulphur and calcium takes place.

Scabies.

℞.	Potassii Iodid	4.	ʒ j.
	Ungt. Sulphuris	36.	ʒ ix.

M.

Scabies.

℞.	Potassii Carb	30.	℥ j.
	Sulph. Sublimat	60.	℥ ij.
	Ungt	240.	℥ viij.

M. HELMERICH.

Silica Hydrata.

The following process has been kindly worked out for me by DR. CHAS. RICE:

First.—Take of

Commercial Silicate of Sodium (Saturated Solution)	1 part by weight.
Hot Water	4 " "

Dissolve the Sil. Sod. in the water, and strain the solution. During straining and exposure to air the carbonic acid in the latter will decompose a little of the solution, and in consequence thereof a little silica will separate. The solution, after straining, is allowed to stand, and the clear liquid syphoned or poured off from the small sediment of silica.

Second.—Take of

Hydrochloric Acid C. P	8 parts by weight.
Water	20 " "

M.

Third.—Take of

Solution No. II. (dilute Acid)	10	parts	by volume.
Water	40	"	"
Sol. No. I. (dil. Sil. Soda)	14	"	"

Mix the dilute acid with the water. Then pour into it rapidly the dilute silicate of sodium solution. Stir quickly to mix intimately, and by counter-stirring bring the mixture to rest as rapidly as possible. After a while, if the mixture is ***not agitated*** or disturbed, a very fine gelatinous magma of hydrated silica will be formed; in fact the whole mass will be a jelly. Should this not be the case, and the mixture remain liquid, about one-half part more of the silicate of soda solution must be added in a similar manner.

The jelly or magma contains all the soda as chloride of sodium. Most of this may be washed out on an extended strainer.

Seborrhœa.

			Grams.	
℞.	Extractum Ergotæ,			
	Silica Hydrata,			
	Sulph. Precip	āā	2.	ʒ ss.
	Ungt. Aquæ Rosæ		30.	℥ j.
M.				H. G. P.

Chancroids and Unhealthy Ulcers.

℞.	Iodoformi		4.	ʒ j.
	Mucilag. Acac.,			
	Glycerini	āā	1.	gr. xv.
	Ol. Menth. pip.		0.06	♏ j.
M.				BRONSON.

Chancres and Syphilitic Ulcers.

℞.	Hydrarg. Oxid. Nig. Hahn	4.	ʒ j.
	Lycopodii	16.	ʒ iv.
M.			H. G. P.

Syphilitic Ulcers.

℞.	Hydrarg. Chlor. Corros	1.	gr. xv.
	Acid. Carbol	3.	gr. xlv.
	Aquæ	100.	℥ iijss.
M.			G. H. FOX.

Urticaria.

℞.	Acidi Benzoici	1.	gr. xv.
	Aquæ	240.	℥ viij.
M.			SQUIRE.

Soothing Ointment.

		Grams.	
℞.	Bismuthi Oxidi	30.	℥ j.
	Acidi Oleici	240.	℥ viij.
	Ceræ Albæ	90.	℥ iij.
	Vaseline	270.	℥ ix.
	Ol. Rosæ	0.25	♏ v.

M. **McCall Anderson.**

Ungt. Diachylon.

℞.	Emplast. Plumbi,	
	Olei Lini	āā

M. Mix carefully over a slow fire. **Hebra.**

Ungt. Diachylon.

℞.	Plumbi Oxidi	90.	℥ iij.
	Ol. Morrhuæ	240.	℥ viij.
	Ol. Lini,		
	Ol. Olivæ	āā 120.	℥ iv.

Heat the oils to 350° F., adding the oxide of lead slowly and stirring for an hour at that heat. Stir till cold. **Sherwell.**

Ungt. Diachylon.

℞.	Emplast. Plumbi,	
	Vaseline	āā

Melt together, stirring till thoroughly mixed; remove from the fire, and stir till cold. **H. G. P.**

INDEX.

ABSINTHIUM, 5
Acanthus mollis, 5
Acetate of Ammonium, 14
  Barium, 31
  Copper, 49
  Lead, 89
  Potassium, 90
  Zinc, 116
Acetic Acid, 6
Acidum Aceticum, 5
  Arseniosum, 23
  Benzoicum, 6
  Boracicum, 6
  Carbolicum, 6
  Chromicum, 7
  Chrysophanicum, 7
  Citricum, 8
  Formicum, 8
  Gallicum, 8
  Hydrocyanicum, 8
  Nitricum, 9
  Nitro-muriaticum, 10
  Picricum, 10
  Pyrogallicum, 10
  Pyrolignosum, 10
  Salicylicum, 10
  Sulphuricum, 11
  Sulphurosum, 11
  Tannicum, 11
Acne, 136
  fluenta, 286
  punctata, 157
  rosacea, 272
Aconitum, 12
  Napellus, 12
  neomontanum, 12
Actæa Spicata, 12
Actual Cautery, 123
Adiantum Capillus Veneris, 13
Æthusa Cynapium, 13
Agaricus Albus, 13
  phalloides, 13
Akebia quinata, 111
Allium, 13
  Sativum, 13
Aloes, 13
Aloe vulgaris, 13
Alopecia, 141
  areata, 144
  circumscripta, 144
Alphos, 245
Alpinia officinarum, 55
Alumen, 13
Aluminii Nitras, 14
Ammonia, 14
Ammoniacum, 15
Ammonii Acetas, 14
  Arsenias, 14
  Carbonas, 15
  Chloridum, 15
  Iodidum, 15
Amygdala Amara, 16
  communis, 16
Amyli Iodidum, 17
Amyl Nitris, 16
Anacardium, 17
  Occidentale, 17
Anamirta Cocculus, 46
Andira Araroba, 7
Anemone nemorosa, 18
  Pulsatilla, 96
Angelica sylvestris, 18
Angioma, 146
Anidrosis, 147
Anisum, 18
Anthrax, 147
Antimonii Chloridum, 18
  et Potassii Tartras, 18
  Sulphuretum, 19
Antimonium, 19
  Crudum, 19
  Sulphuratum, 20
Antimony, 19
Apium Petroselinum, 20
Aralia Nudicaulis, 20
  Spinosa, 20
Area Celsi, 144
Argenti Chloridum, 20
  Nitras, 20
Aristolochia Clematidis, 22
  Serpentaria, 105
Armoracia, 22
Arnica, 22
Arseniate of Ammonium, 14
  Copper, 49
  Iron, 54
Arsenic, 23
Arsenici Bromidum, 28
  Iodidum, 28
Arsenicum Hydrogenisatum, 28

Artemisia Abrotanum, 29
    Absinthium, 5
    pauciflora, 103
Arum, 29
Asafœtida, 29
Asarum, 29
Asclepias decumbens, 29
    gigantea, 37
    tuberosa, 29
    vincetoxicum, 29
Atropa Belladonna, 31
    Mandragora, 75
Auri Chloridum, 29
Aurum, 29

BALSAMODENDRON Myrrha, 76
Balsamum Gurgunicum, 30
    Peruvianum, 30
Baptisia tinctoria, 31
Barii Acetas, 31
    Chloridum, 31
    Sulphidum, 31
Belladonna, 31
Benzoate of Iron, 54
    Lithium, 74
Benzoic Acid, 6
Benzoinum 32
Betula Alba, 33
Bicarbonate of Sodium, 106
Bichloride of Mercury, 64
Bichromate of Potassium, 90
Bignonia Caroba, 33
Biniodide of Mercury, 65
Binoxalate of Potassium, 91
Bismuthi Subnitras, 33
Bisulphide of Carbon, 40
Bitter Almond, 16
Black Oxide of Manganese, 75
Black Sulphide of Antimony, 19
    of Mercury, 67
Boletus Laricis, 13
Boracic Acid, 6
Brassica Napus, 33
Bromide of Arsenic, 28
    Lithium, 74
    Mercury, 64
    Potassium, 91
Bromidrosiphobia, 152
Bromidrosis, 151
Bromine, 33
Brominium, 33
Brucia, 77
Bryonia, 33
    Alba, 33
Bucnemia tropica, 171
Butter of Antimony, 18
Buxus sempervirens, 34

CACTUS Grandiflorus, 34
Cadmii Iodidum, 34
Caladium Seguinum, 34
Calcii Carbonas, 34
    Chloridum, 34
    Phosphas, 35
    Sulphidum, 35
Calendula Officinalis, 36
Callositas, 152
Callus, 152
Calomel, 64
Calotropis gigantea, 36
Calx, 37
    Antimonii Sulphurata, 37
    Chlorinata, 38
Camphora, 38
Cannabis Indica, 38
Cannabis Sativa, 38
Cantharidin, 39
Cantharis, 38
Capsicum, 39
Carbolic Acid, 6
Carbonate of Ammonium, 15
    Calcium, 34
    Lead, 89
    Potassium, 92
    Sodium, 106
    Zinc, 116
Carbonii Bisulphidum, 40
Carbuncle, 147
Cardol, 17
Carduus benedictus, 40
Carota, 40
Cassia Alata, 40
Centaurea benedicta, 40
Cereus Grandiflora, 34
Chaulmoogra oil, 78
Chelidonium majus, 40
Cheloid, 197
Chimaphila umbellata, 41
Chioasma, 153
Chloral, 41
Chlorate of Potassium, 92
Chloride of Ammonium, 15
    Antimony, 18
    Barium, 31
    Calcium, 34
    Chromium, 41
    Gold, 29
    Iron, 54
    Platinum, 88
    Silver, 20
    Zinc, 117
Chromate of Potassium, 93
Chromic Acid, 7
Chromii Chloridum, 41
Chromophytosis, 155
Chrysanthemum leucanthemum, 42
Chrysophanic Acid, 7
Cichorium Intybus, 42
Cimicifuga, 42
Cinchona, 42
Cinchonidiæ Sulphas, 45
Cinnamomum Camphora, 38
Citric Acid, 8
Citrus Limonum, 8, 45
Claviceps purpurea, 51
Clematis erecta, 45
    Vitalba, 46
Coal-tar, 88
Coca, 46
Cocculus, 46

Cochlearea Armoracia, 22
Cod liver Oil, 78
Coffea Arabica, 46
Colchicum, 46
Collodium, 46
Comedo, 157
Conia, 47
Conium, 47
Copaiba, 47
Copaifera Lansdorfii, 47
Copper, 48
Corrosive sublimate, 64
Corydalis bulbosa, 48
Catula, 48
Crocus, 48
Croton Tiglium, 79
Cubeba, 48
Cunila pulegiodes, 48
Cupri Acetas, 49
  Arsenias, 49
  Sulphas, 49
Cuprum, 48
Cyanide of Mercury, 65
  Potassium, 93
Cydonium, 49
Cynoglossum officinale, 49

DAPHNE Gnidium, 49
  Mezereon, 76
Datura Stramonium, 107
Daucus Carota, 40
Defluvium Capillorum, 141
Delphinium, 50
Diatheses, 126
Digitalis, 50
Dioscorea Alata, 50
Dipsacus sylvestris, 50
Dipterocarpus, 30
Dorema Ammoniacum, 15
Doryphora decemlineata, 39
Dracontium, 50
Drosera, 50
Dulcamara, 50

ECZEMA, 158
  marginatum, 310
Electricity, 121
Elephantiasis, 171
  Arabum, 171
  Græcorum, 198
Ephelis, 174
Ephidrosis olens, 151
Epiphegus, 51
Epithelial cancer, 175
Epithelioma, 175
Ergota, 51
Erysimum Alliaria, 52
Erysipelas, 178
Erythema, 180
  intertrigo, 196
  multiforme, 181
  nodosum, 182
  pernio, 236
Erythroxylon Coca, 46
Ethylate of Sodium, 106

Eucalyptus, 52
Euonymus Europæus, 52
Eupatorium, 52
Euphorbia corollata, 53
  Lathyris, 53
  officinarum, 52
  resinifera, 53
Euphorbium, 53

FAVUS, 184
Fermentum, 53
Ferri Arsenias, 54
  Benzoas, 54
  Chloridum, 54
  Iodidum, 55
  Peroxidum, 55
  Sulphas, 55
  Sulphidum, 55
Ferrum, 53
Ferula galbaniflua, 55
Formic acid, 8
Frangula, 55
Freckles, 174
Fumaria officinalis, 55
Furuncle, 187

GALANGA, 55
Galbanum, 55
Galega officinalis, 56
Galium, 56
Gallic Acid, 8
Gentiana, 56
Geranium Robertianum, 56
Glycerinum, 56
Gnaphalium Stœchas, 56
Gold, 29
Golden Sulphuret of Antimony, 20
Graphites, 56
Gratiola officinalis, 57
Green Iodide of Mercury, 65
Grindelia robusta, 57
Guarana, 57
Guaiacum, 57
Gurgun Balsam, 30
Gutta rosea, 272
Gynocardia odorata, 78

HAMAMELIS Virginica, 57
Hedeoma, 57
Helianthus Annuus, 57
Heliotropium majus, 57
Helleborus, 58
Hepar Sulphuris, 35
Herpes, 188
  circinatus, 310
  labialis, 189
  progenitalis, 189
  tonsurans, 307
  zoster, 315
Heuchera, 58
Hippomane Mancinella, 58
Hoàng-Nàn, 58
Humulus, 58
Hura Brasiliensis, 58
  crepitans, 58

- Hydrargyri Bromidum, 64
  - Chloridum, Corrosivum, 64
  - Chloridum Mite, 64
  - Cyanidum, 65
  - Iodidum Rubrum, 65
  - Iodidum Viride, 65
  - Nitras, 66
  - Oleas, 66
  - Oxidum Rubrum, 67
  - Sulphas Flava, 67
  - Sulphidum Nigrum, 67
  - Sulpho-cyanidum, 67
- Hydrargyrum, 59
  - Ammoniatum, 63
  - cum Creta, 64
  - Oxidum Nigrum Hahnemanni, 66
- Hydrastis, 68
- Hydrocotyle Asiatica, 68
- Hydrocyanic Acid, 8
- Hydrophyllum Canadense, 69
- Hyoscyamus albus, 69
  - niger, 69
- Hyperidrosis, 191
- Hyposulphite of Sodium, 106
- Hypoxis erecta, 69
- Hyssopus officinalis, 69

- ICHTHYOSIS, 193
- Imperatoria Ostruthium, 69
- Impetigo Contagiosa, 195
- Intertrigo, 196
- Inula, 69
- Iodide of Ammonium, 15
  - Arsenic, 28
  - Cadmium, 34
  - Iron, 55
  - Lead, 89
  - Potassium, 93
  - Starch, 17
  - Sulphur, 109
  - Zinc, 117
- Iodine, 70
- Iodoform, 70
- Ipecacuanha, 70
- Iris Florentina, 71
  - Versicolor, 71
- Iron, 53

- JABORANDI, 86
- Juglans cinerea, 72
  - nigra, 72
  - regia, 72
- Juniperus, 73
  - Oxycedrus, 77
  - Sabina, 102

- KALMIA, 71
- Kamala, 71
- Kava, 72
- Kelis, 197
- Keloid, 197
- Krameria, 72

- LAPPA, 73
- Lapsana communis, 73
- Laurocerasus, 73
- Ledum palustre, 73
- Leonurus lanatus, 73
- Lepidium latifolium, 73
  - sativum, 74
- Lepra, 198
  - Arabum, 198
  - Græcorum, 245
  - vulgaris, 245
- Leprosy, 198
- Leucoderma, 313
- Lichen æstivus, 208
  - planus, 210
  - ruber, 211
  - scrofulosorum, 212
  - tropicus, 208
- Linum, 74
- Liquidamber orientalis, 108
- Lithii Benzoas, 74
  - Bromidum, 74
- Lobelia, 74
- Lonicera periclymenum, 74
- Lupulina, 58
- Lupus, 213
  - erythematosus, 214
  - exedens, 217
  - vorax, 217
  - vulgaris, 216
- Lycoperdon Bovista, 74
- Lycopodium, 74
- Lytta vesicatoria, 38

- MACULA gravidarum, 153
  - hepatica, 153
  - uterina, 153
- Magnolia, 75
- Mais Guasto, 75
- Mandragora, 75
- Manganesii Oxidum Nigrum, 75
- Maruta Cotula, 48
- Matricaria, 75
- Mauricia vinifera, 75
- Melaleuca Cajuputi, 78
- Melissa, 75
- Mentagra parasitica, 309
- Mentha Piperita, 76
- Menyanthes trifoliata, 111
- Mercurius Solubilis, 67
- Mercury, 59
- Mezereon, 76
- Morphia, 81
- Moschus, 76
- Mucuna, 76
- Mudár, 36
- Myroxylon Pereiræ, 30
- Myrrha, 76

- NÆVUS, 228
  - pigmentosus, 234
  - spilus, 234
  - vascularis, 228
- Narcissus Pseudo-Narcissus, 76
- Narthex Asafœtida, 29
- Nerium Oleander, 77

- Nitrate of Aluminium, 14
  - Lead, 89
  - Mercury, 66
  - Potassium, 95
  - Silver, 20
  - Zinc, 117
- Nitric Acid, 9
- Nitrite of Amyl, 16
- Nitro-Muriatic Acid, 10
- Nux Vomica, 77

- ŒNANTHE Crocata, 77
- Oil of Cashew, 17
- Olea Europœa, 79
- Oleander, 77
- Oleate of Lead, 89
  - Mercury, 66
- Oleum Cadinum, 77
  - Cajuputi, 78
  - Gynocardiæ, 78
  - Juniperi, 78
  - Maidis Empyreumaticum, 78
  - Morrhuæ, 78
  - Olivæ, 79
  - Oryzæ Empyreumaticum, 79
  - Ricini, 79
  - Rusci, 33
  - Succini, 79
  - Tiglii, 79
- Onoperdon Acanthium, 80
- Opium, 81
- Orobanche Virginiana, 51
- Oryza sativa, 79
- Osmidrosis, 151
- Oxide of Zinc, 117

- PAPAVER somniferum, 81
- Paraffin, 81
- Paullinia sorbilis, 57
- Pediculosis, 237
  - capitis, 237
  - corporis, 239
  - pubis, 240
- Pemphigus, 235
  - foliaceus, 235
  - vulgaris, 235
- Permanganate of Potassium, 95
- Pernio, 236
- Peroxide of Iron, 55
  - Manganese, 75
- Petroleum, 83
- Phaseolus vulgaris, 84
- Phellandrium aquaticum, 84
- Phosphate of Calcium, 85
- Phosphide of Zinc, 117
- Phosphorus, 84
- Phthiriasis, 237
  - capitis, 237
  - corporis, 239
  - pubis, 240
- Physostigma, 86
- Phytolacca, 86
- Phytosis versicolor, 155
- Picrate of Potassium, 95
- Picric Acid, 10
- Pilocarpia, 86
- Pilocarpiæ Iodo-hydrargyras, 87
- Pilocarpus, 86
- Pimpinella Anisum, 18
- Pinus Abies, 87
  - palustris, 87, 110
  - sylvestris, 87
- Piper, 87
  - Cubeba, 48
  - methysticum, 72
- Pistacia vera, 87
- Pityriasis, 241
  - alba, 241
  - rubra, 243
  - simplex, 241
  - versicolor, 155
- Pix Burgundica, 87
  - Liquida, 87
  - lithanthracis, 88
- Plantago major, 88
- Platini Chloridum, 88
- Plumbago Europæa, 88
  - rosea, 88
  - scandens, 88
- Plumbi Carbonas, 89
  - Iodidum, 89
  - Nitras, 89
  - Oleas, 89
  - Subacetas, 89
- Plumbum, 88
- Podophyllum, 89
- Polygala Senega, 105
- Polygonum Hydropiper, 90
- Pompholyx, 235
- Porrigo, 195
  - decalvans, 144
  - favosa, 184
- Potassa, 90
- Potassii Acetas, 90
  - Bichromas, 90
  - Binoxalas, 91
  - Bromidum, 91
  - Carbonas, 92
  - Chromas, 93
  - Cyanidum, 93
  - Iodidum, 93
  - Nitras, 95
  - Permanganas, 95
  - Picras, 95
  - Silicas, 95
  - Sulphidum, 95
- Proto-iodide of Mercury, 65
- Prunus domestica, 96
  - Laurocerasus, 73
- Prurigo, 243
- Psoralea corylifolia, 96
- Psoriasis, 245
- Pulsatilla, 96
- Purpura, 270
- Pyrogallic Acid, 10
- Pyrola rotundifolia, 96
- Pyroligneous Acid, 10
- Pyrus Cydonia, 49

QUERCUS infectoria, 8, 11
Quillaya Saponaria, 96
Quiniæ Sulphas, 42

RANUNCULUS, 96
    acris, 97
    Flammula, 97
    sceleratus, 97
Red Iodide of Mercury, 65
Red Oxide of Mercury, 67
Rhamnus Frangula, 55
Rheum, 97
Rheum hybridum, 97
Rheumic Diathesis, 125
Rhinacanthus communis, 97
Rhododendron Chrysanthum, 97
Rhus diversiloba, 100
    glabrum, 100
    toxicodendron, 97
    venenata, 100
Ribes rubrum, 101
Ricinus communis, 79
Ringworm, 306
Rosacea, 272
Rosmarinus, 101
Rottlera tinctoria, 71
Rubus villosus, 101
Rumex acetosa, 101
    acutus, 101
Ruta, 101
    muriaria, 101

SABADILLA, 101
Sabina, 102
Salicylate of Sodium, 107
Salicylic Acid, 10
Salvia, 102
Sambucus Canadensis, 102
    nigra, 102
Sanguinaria, 102
Santonate of Sodium, 107
Santoninum, 103
Saponaria officinalis, 103
Saponin, 96, 103
Sarcoma, 275
Sarsaparilla, 103
Sassafras, 104
Scabies, 276
Scabiosa Succisa, 104
Scandix Cerefolium, 104
Scilla, 104
Scleriasis, 281
Scleroderma, 282
Scordium, 104
Scrofularia nodosa, 105
Scrofulide, 213
    érythémateuse, 214
    phlegmoneuse, 284
    tuberculeuse, 216
Scrofuloderma phlegmonosum, 284
Seborrhœa, 286
Sedum acre, 105
Sempervivum tectorum, 105
Senega, 105
Serpentaria, 105

Silica, 105
    Hydrata, 105
Silicate of Potassium, 95
    Sodium, 107
Sinapis, 106
Sisymbrium Nasturtium, 106
Smilax officinalis, 103
Sodii Bicarbonas, 106
    Carbonas, 106
    Ethylas, 106
    Hyposulphis, 106
    Salicylas, 107
    Santonas, 107
    Silicas, 107
Solanin, 107
Solanum Dulcamara, 50, 107
    nigrum, 107
Solidago odora, 107
Spargosis, 171
Spilanthus oleracea, 107
Stachys recta, 107
Staphisagria, 50
Stearrhœa, 286
Stillingia, 108
Stramonium, 108
Strychnia, 77
Strychnos Gautheriana, 58
    Nux vomica, 77
Styrax Benzoin, 6
    Liquidus, 108
Subnitrate of Bismuth, 33
Sulphate of Copper, 49
    Iron, 55
    Zinc, 117
Sulphide of Barium, 31
    Calcium, 35
    Iron, 55
    Mercury, 67
    Potassium, 95
Sulpho-cyanide of Mercury, 67
Sulphur, 109
Sulphuric Acid, 11
Sulphuris Iodidum, 109
Sulphurous Acid, 11
Sycosis parasitica, 309
Symphitum Officinale, 109
Syphilis, 287

TANNIC Acid, 11
Tannin, 11
Taraxacum, 110
Tartar emetic, 18
Taxus bacata, 110
Telangiectasis, 146
Terebinthina, 110
Teucrium Chamædrys, 110
    Scordium, 104
Thapsia garganica, 110
Thevetia nerpifolia, 111
Thuja, 111
Thymol, 111
Thymus vulgaris, 111
Tinea circinata, 310
    decalvans, 144
    favosa, 184

Tinea tonsurans, 307
  trichophytina, 306
  versicolor, 155
Tong Pang Chong, 111
Torula Cerevisiæ, 53
Trichophytosis, 306
  barbæ, 309
  capitis, 307
  corporis, 310
  genito-cruralis, 310
Trifolium fibrineum, 111
  pratense, 112
Triticum repens, 112
Tussilago Farfara, 112
Tyloma, 152
Tylosis, 152

ULMUS Campestris, 112
Urtica, 112
Urticaria, 310
Ustilago Maidis, 112

VALERIANA, 113
Veratria, 101
Veratroidia, 113
Veratrum album, 113
  Sabadilla, 101
  Viride, 113
Verbena officinalis, 113
Viola tricolor, 113
Vitiligo, 313

WOORARA, 116

XANTHIUM strumarium, 116
Xantholylum fraxineum, 116

YELLOW Iodide of Mercury, 65
Yellow Sulphate of Mercury, 67

ZEA Mays, 78
Zinci Acetas, 116
  Carbonas, 116
  Chloridum, 117
  Iodidum, 117
  Nitras, 117
  Oleas, 117
  Oxidum, 117
  Phosphidum, 117
  Sulphas, 117
  Sulphas Exsiccata, 117
Zona, 315
Zoster, 315

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